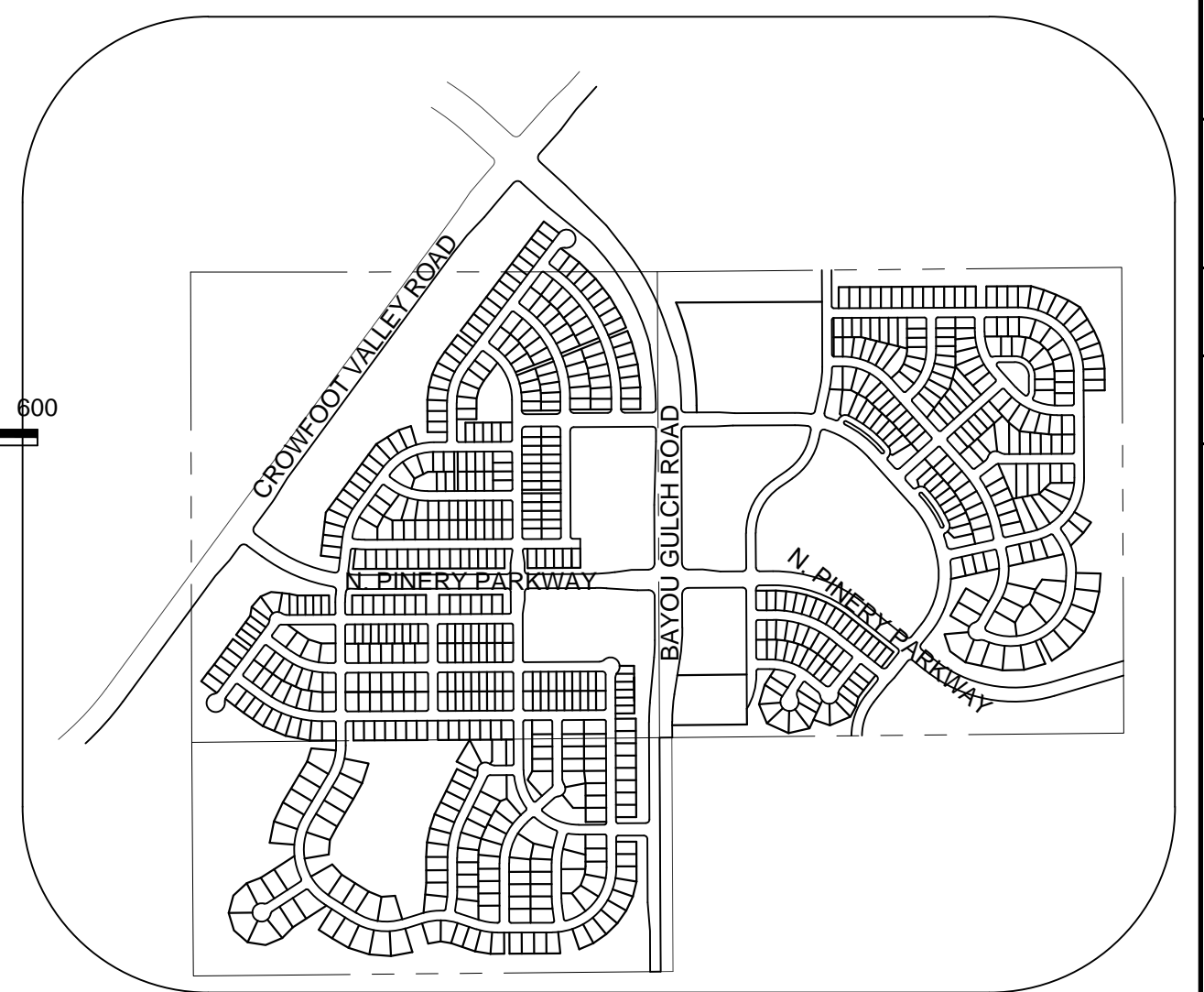




PLAN: LEMON GULCH WATERLINE CROSSING
HORIZONTAL SCALE: 1" = 50'

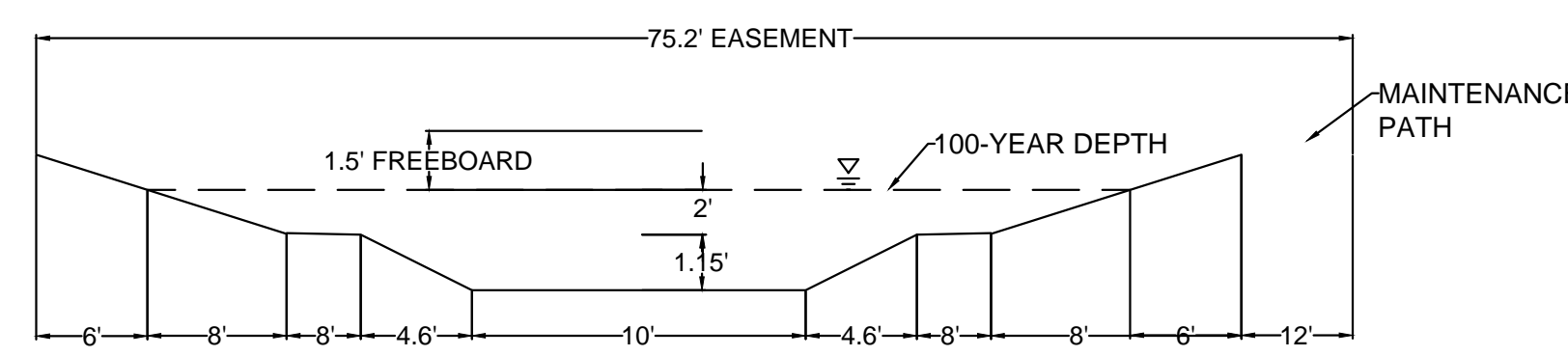


KEYMAP
N.T.S.

LEGEND

	DESIGN POINT
	XX = BASIN ID A= AREA R2= 2 YR RUNOFF CO-EFF R100= 100 YR RUNOFF CO-EFF
	DETENTION POND
	CHANNEL DROP STRUCTURE
	BASIN LINE
	MAJOR BASIN LINE
	PROPOSED MAJOR CONTOURS
	PROPOSED MINOR CONTOURS
	EXISTING MAJOR CONTOURS
	EXISTING MINOR CONTOURS
	PROPOSED FLOW ARROW

- NOTE:
1. THE TOWN OF PARKER REVIEW CONSTITUTES GENERAL COMPLIANCE WITH THE TOWN'S STANDARDS AND APPROVED VARIANCES, SUBJECT TO THESE PLANS BEING STAMPED, SIGNED, AND DATED BY THE PROFESSIONAL ENGINEER OF RECORD. REVIEW BY THE TOWN DOES NOT CONSTITUTE APPROVAL OF THE PLAN DESIGN OR ACCURACY AND CORRECTNESS OF ENGINEERING CALCULATIONS. ERRORS IN THE DESIGN OR CALCULATIONS REMAIN THE RESPONSIBILITY OF THE REGISTERED PROFESSIONAL ENGINEER WHOSE STAMP AND SIGNATURE ARE AFFIXED TO THIS DOCUMENT.
 2. PONDS ARE MAINTAINED BY METRO DISTRICT.
 3. OUTLET STRUCTURE AND OVERFLOW WEIR DETAILS ARE PROVIDED WITH CIVIL PLANS.
 4. DROP STRUCTURE DETAILS ARE PROVIDED IN CHANNEL PLAN AND PROFILE SHEET.



CHANNEL SECTION A-A
NO TO SCALE

PLAN: OVERALL DRAINAGE MAP
HORIZONTAL SCALE: 1" = 50'

BENCHMARK
DOUGLAS COUNTY CONTROL POINT KNOWN AS 1.060032, BEING A 3-1/4" ALUMINUM CAP, BEING LOCATED IN THE SOUTHWEST QUARTER OF SECTION 33, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN, HAVING A PUBLISHED ELEVATION OF 1799.2870 METERS (5903.13 FEET) NAVD '88 DATUM.

BASIS OF BEARINGS:
THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 9 BEING MONUMENTED AT THE NORTHEAST CORNER OF SAID SECTION 9 BY A 3-1/4" ALUMINUM CAP STAMPED LS 23053 AND AT THE EAST QUARTER CORNER OF SAID SECTION 9 BY A 2-1/2" ALUMINUM CAP STAMPED LS 69355 BEING CONSIDERED TO BEAR SOUTH 00°15'06" EAST, 2648.70 FEET.

CALL 811
TWO WORKING DAYS
BEFORE YOU DIG
UNCCC
1-800-922-1987

TOWN OF PARKER, PUBLIC WORKS DIRECTOR _____ DATE _____
TOWN OF PARKER, PUBLIC WORKS MANAGER - STORMWATER _____ DATE _____
TOWN OF PARKER, PUBLIC WORKS MANAGER - TRANSPORTATION _____ DATE _____

PREPARED UNDER THE SUPERVISION OF

MARK SCHEURER
COLORADO P.E. 48988

SHEET NUMBER	DRAWN BY: AYK	CHECKED BY: JJ	DATE: MAY 2017	SCALE:	AS SHOWN	FILE NO:	8130283701	
				1A				
				TRAITS AT CROWFOOT FINAL DRAINAGE MAP	OVERALL DRAINAGE MAP			
				ESX MANAGEMENT 7253 South Alton Way CENTENNIAL, CO 80112				
				10333 E. Dry Creek Rd. Suite 210 Englewood, CO 80150 Tel: (720) 482-9526 Fax: (720) 482-9548				
				CVL CONSULTANTS				
				Revisions	No.	Date	Appr.	Date

Note:
1) 0% slope indicates sump inlet.

DIRECT FLOW						
BASIN ID	AREA (AC)	Imperviousness %	Q2 (CFS)	Q100 (CFS)	Street Type	Slope %
A1	4.11	43.77	3.84	17.73	Local	2.00
A2	1.84	52.16	2.22	9.10	Local	0.00
A3	3.23	48.80	3.16	13.54	Local	0.00
A4	4.07	34.03	2.78	15.39	Local	0.00
A5	2.04	49.08	2.27	9.70	Local	0.00
A6	4.96	35.28	3.58	19.32	Local	1.50
A7	3.96	50.41	4.44	18.62	Local	4.00
A8	2.86	52.68	3.45	14.07	Local	0.00
A9	3.44	50.33	3.75	15.73	Arterial	2.00
A10	0.72	61.44	1.12	4.14	Arterial	0.00
A11	2.39	53.79	2.92	11.75	Local	2.00
A12	2.96	48.02	3.22	13.95	Local	1.50
A13	5.13	47.44	5.03	21.94	Local	5.00
A14	1.43	54.86	1.94	7.68	Local	0.00
A15	7.15	26.55	3.58	23.96	Arterial	0.00
A16	0.75	76.70	1.39	4.52	Local	2.00
A17	3.76	52.91	4.19	17.02	Local	2.00
A18	4.54	52.87	2.95	11.99	Local	2.00
A19	2.09	51.35	2.51	10.32	Local	4.00
A20	2.04	49.09	2.28	9.72	Local	2.00
A21	3.02	52.59	3.69	15.04	Local	1.50
A22	3.07	74.76	6.17	20.24	Local	2.50

Note:
1) 0% slope indicates sump inlet.

DIRECT FLOW						
BASIN ID	AREA (AC)	Imperviousness %	Q2 (CFS)	Q100 (CFS)	Street Type	Slope %
B1	21.00	23.33	8.48	62.92	Local	7.00
B2	3.13	51.76	3.82	15.75	Local	3.00
B3	4.92	50.31	5.58	23.45	Local	3.00
B4	2.51	58.47	3.85	15.72	Local	5.00
B5	3.19	53.20	3.88	15.72	Local	6.00
B6	3.19	53.20	3.88	15.72	Local	6.00
B7	5.76	49.66	5.79	24.54	Local	6.00
B8	4.93	46.94	4.95	21.81	Res. Blvd	0.00
B9	2.81	49.17	2.94	12.55	Local	0.00
B10	0.65	76.70	1.28	4.14	Res. Blvd	0.00
B11	0.84	76.70	1.59	5.15	Res. Blvd	0.00
B12	3.30	75.52	6.18	20.16	Local	3.00
B13	3.19	53.20	3.88	15.72	Local	2.00
B14	3.19	53.20	3.88	15.72	Local	2.00
B15	2.01	53.11	2.50	10.13	Local	1.00

Note:
1) 0% slope indicates sump inlet.

DIRECT FLOW						
BASIN ID	AREA (AC)	Imperviousness %	Q2 (CFS)	Q100 (CFS)	Street Type	Slope %
C1	10.07	45.10	8.72	39.44	Local	0.00
D1	5.94	42.41	5.34	25.23	Local	0.00
D2	5.33	46.14	5.58	24.83	Local	5.00
D3	3.66	43.82	3.28	15.11	Local	5.00
D4	2.91	42.33	2.45	11.57	Local	3.00
D5	6.97	33.88	4.29	23.81	Arterial	0.00
D6	2.57	42.99	2.30	10.74	Arterial	6.00
D7	2.58	42.09	2.48	11.76	Local	4.00
D8	0.85	51.73	1.06	4.38	Local	5.00
D9	3.90	49.27	4.06	17.30	Arterial	0.00
D10	4.80	50.52	5.60	23.45	Local	0.00
D11	3.29	84.30	6.19	19.00	Arterial	0.00
D12	1.13	84.30	2.13	6.53	Arterial	1.50

Note:
1) 0% slope indicates sump inlet.

DIRECT FLOW						
BASIN ID	AREA (AC)	Imperviousness %	Q2 (CFS)	Q100 (CFS)	Street Type	Slope %
E1	4.04	52.65	4.95	20.19	Local	2.70
E2	5.27	52.02	4.71	19.36	Local	0.00
E3	4.77	52.31	5.84	23.07	Local	3.00
E4	3.20	52.07	3.78	14.69	Local	4.00
E5	2.76	53.77	3.09	12.43	Local	0.00
E6	2.63	53.59	3.06	12.34	Local	1.00
E7	2.77	51.99	3.21	13.17	Local	0.00
E8	2.68	53.33	3.13	12.64	Local	2.00
E9	4.84	39.52	3.92	19.46	Local	2.00
E10	0.70	56.03	0.85	3.31	Local	1.00
E11	3.99	30.00	2.48	14.96	Local	1.00
E12	3.28	30.00	2.04	12.33	Local	6.00
E13	4.45	30.00	2.76	16.67	Local	1.00
E14	9.14	44.35	8.62	39.37	Local	0.00
E15	1.89	51.97	2.08	8.55	Local	2.00
E16	1.57	73.60	2.68	8.89	Local	6.00
E17	1.55	73.60	2.64	8.76	Local	1.00
E18	2.72	52.96	3.45	14.00	Local	1.50
E19	2.91	53.40	3.58	14.46	Local	1.20
E20	2.75	53.49	3.12	12.57	Local	2.00
E21	2.05	54.72	2.56	10.18	Local	2.00
E22	4.41	53.09	5.39	21.86	Local	2.70
E23	4.11	51.69	4.81	19.86	Local	2.70
E24	4.23	30.00	2.63	15.87	Local	2.00
E25	2.78	35.90	2.16	11.51	Local	2.00

Note:
1) 0% slope indicates sump inlet.

DIRECT FLOW						
BASIN ID	AREA (AC)	Imperviousness %	Q2 (CFS)	Q100 (CFS)	Street Type	Slope %
F1	1.71	90.64	4.59	13.55	Local	2.50
F2	1.77	93.50	4.96	14.53	Local	2.50
F3	3.60	19.77	1.47	12.47	Local	1.00
F4	3.79	53.06	4.56	18.47	Local	4.00
F5	4.58	46.86	4.46	19.66	Res. Blvd	4.00
F6	4.93	38.37	3.70	18.75	Local	0.00
F7	4.51	18.05	1.68	15.41	Res. Blvd	0.00
F8	7.93	34.99	5.57	30.18	Local	0.00
F9	1.28	66.27	1.75	6.18	Res. Blvd	0.00
F10	1.93	92.20	5.30	15.64	Local	2.50
F11	1.50	91.79	4.07	12.03	Local	2.50
F12	1.22	93.17	3.39	9.95	Local	2.50
F13	3.58	52.91	4.36	17.70	Local	4.00

CUMULATIVE FLOW			
Design Point ID	Q2 (CFS)	Q100 (CFS)	%
1A	3.84	17.73	
1B	5.04	60.61	
1C	18.94	72.95	
1D	22.01	88.25	
1E	4.69	74.09	
1F	9.74	45.15	
1G	4.44	61.21	
1H	24.90	99.54	
1I	3.75	15.73	
1J	7.60	40.45	
1K	2.92	11.75	
1L	3.22	13.95	
1M	9.77	37.49	
1N	11.20	49.77	
1O	3.58	23.96	
1P	5.05	21.53	
1Q	6.90	27.93	
1R	2.95	11.99	
1S	2.51	10.32	
1T	6.64	44.92	
1U	6.71	27.72	
2	11.54	45.92	
3	15.88	42.02	(Not Relieved for 100 year)
4	19.35	41.99	

CUMULATIVE FLOW			
Design Point ID	Q2 (CFS)	Q100 (CFS)	%
2A	13.11	74.41	
2B	6.15	15.75	
2C	5.58	33.21	
2D	13.83	60.55	
2E	3.88	76.36	
2F	3.88	29.09	
2G	5.79	24.54	
2H	4.95	21.81	
2I	2.94	35.69	
2J	26.73	169.56	
2K	27.76	172.83	
2L	10.97	50.07	
2M	3.88	15.72	
2N	3.88	15.72	
2O	2.50	10.13	
5	18.73	76.25	
6	7.44	84.75	(Not Relieved for 100 year)
7	7.40	84.75	(Not Relieved for 100 year)
9	19.80	84.75	
10	32.55	84.62	

CUMULATIVE FLOW			
Design Point ID	Q2 (CFS)	Q100 (CFS)	%
3A	8.95	54.35	

CUMULATIVE FLOW			
Design Point ID	Q2 (CFS)	Q100 (CFS)	%
4A	18.01	80.94	
4B	5.58	24.83	
4C	3.28	15.11	
4D	5.63	26.26	
4E	8.32	42.18	
4F	5.19	24.34	
4G	2.48	11.76	
4H	1.06	4.38	
4I	4.06	17.30	
4J	10.66	45.70	
4K	6.19	19.00	
4L	2.94	10.02	
11	12.69	56.80	
12	11.38	55.22	
13	15.66	68.43	

CUMULATIVE FLOW			
Design Point ID	Q2 (CFS)	Q100 (CFS)	%
14	32.04	124.18	
15	36.95	142.09	
5A	14.28	56.31	
5B	9.56	40.76	
5C	18.85	70.87	
5D	21.89	79.97	
5E	23.45	83.44	
5F	3.06	12.34	
5G	6.16	142.25	
5H	29.48	81.28	
5I	3.92	19.46	
5J	0.85	3.31	
5K	2.48	14.96	
5L	4.60	27.74	
5M	2.76	16.67	
5N	10.74	49.99	
5O	2.08	8.55	
5P	19.53	49.94	
5Q	5.06	23.96	
5R	4.86	14.00	
5S	24.94	67.90	
5T	3.12	12.57	
5U	2.56	10.18	
5V	9.85	39.52	
5W	4.81	19.86	
5X	2.63	15.87	
5Y	2.16	11.51	

CUMULATIVE FLOW			
Design Point ID	Q2 (CFS)	Q100 (CFS)	%
6A	21.41	56.86	
6B	8.28	23.93	
6C	9.45	44.87	
6D	4.56	18.47	
6E	29.25	58.80	
6F	13.68	69.19	
6G	3.39	22.24	
6H	10.08	42.10	
6I	1.75	36.44	
6Ia	-	78.50	
6J	17.19	46.79	
6K	12.18	34.01	
6L	3.39	9.95	
6M	8.80	35.37	
16	27.15	55.27	
17	36.01	97.22	

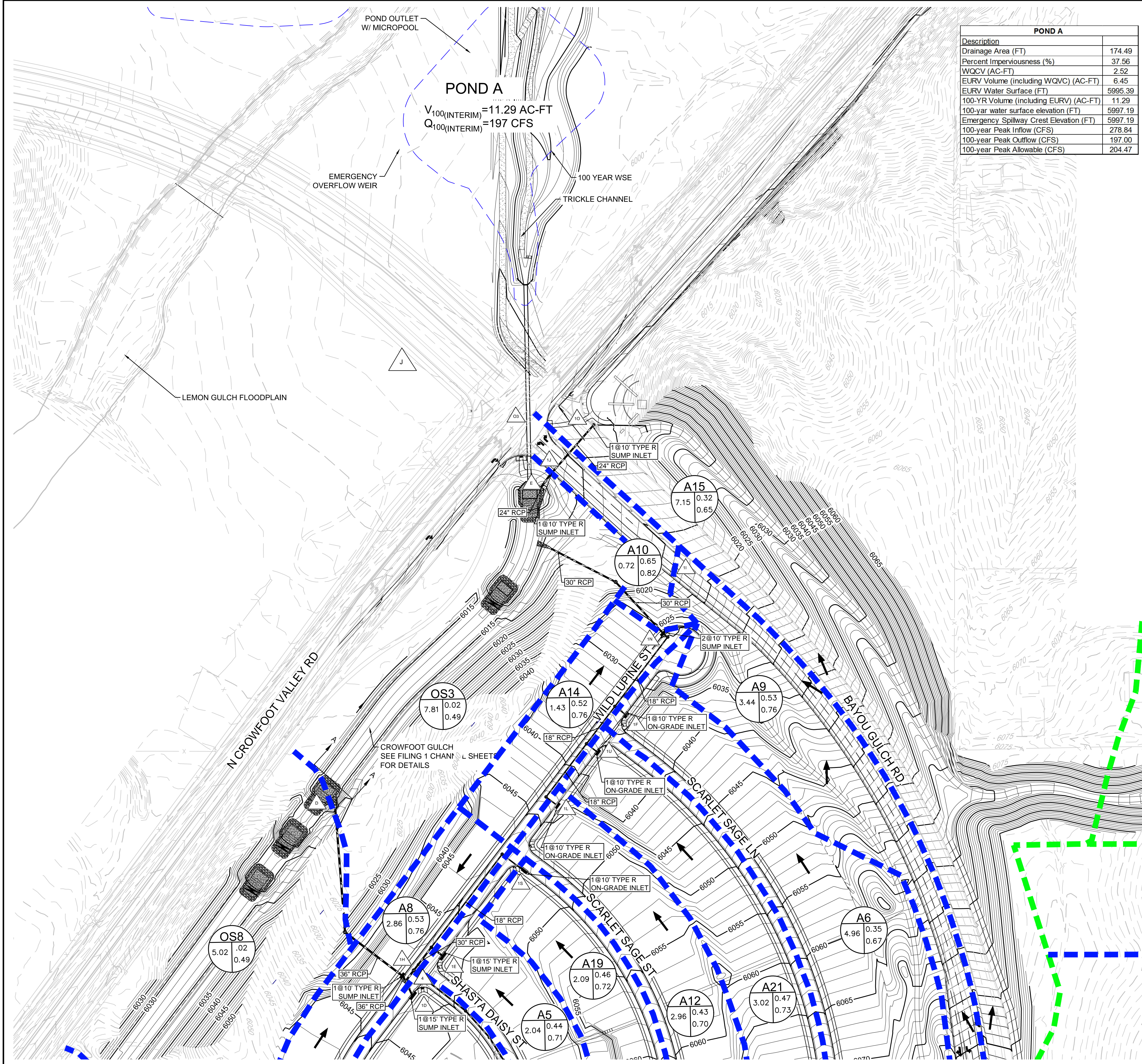
CHANNEL DESIGN POINT SUMMARY			
Design Point ID	Q5 (CFS)	Q100 (CFS)	%
A	25.55	76.45	
B	49.11	150.81	
C	58.29	188.03	
D	73.01	240.76	
E	83.23	280.45	

NOTE: Flows are from SWMM analysis. See drainage report for more details.

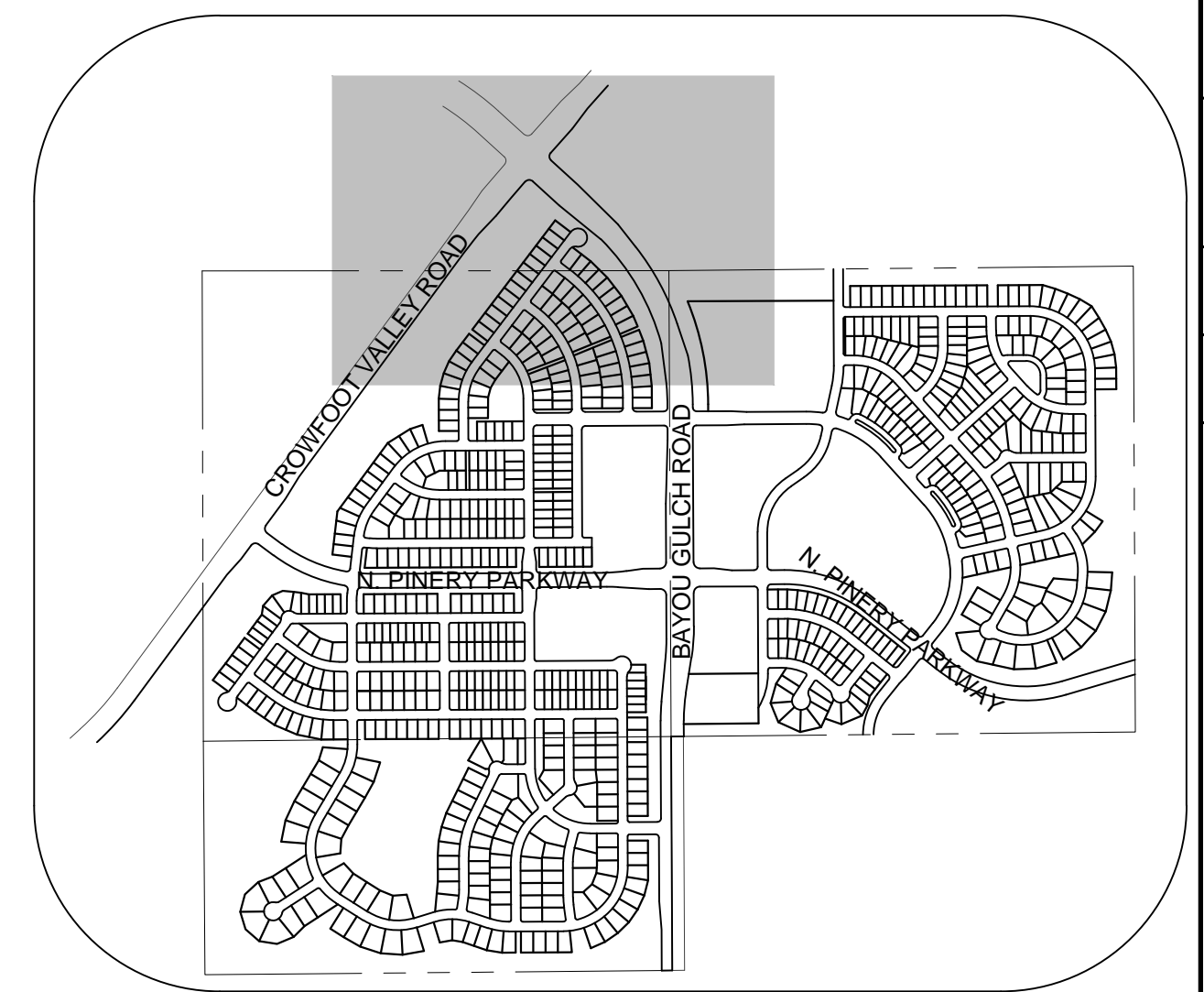
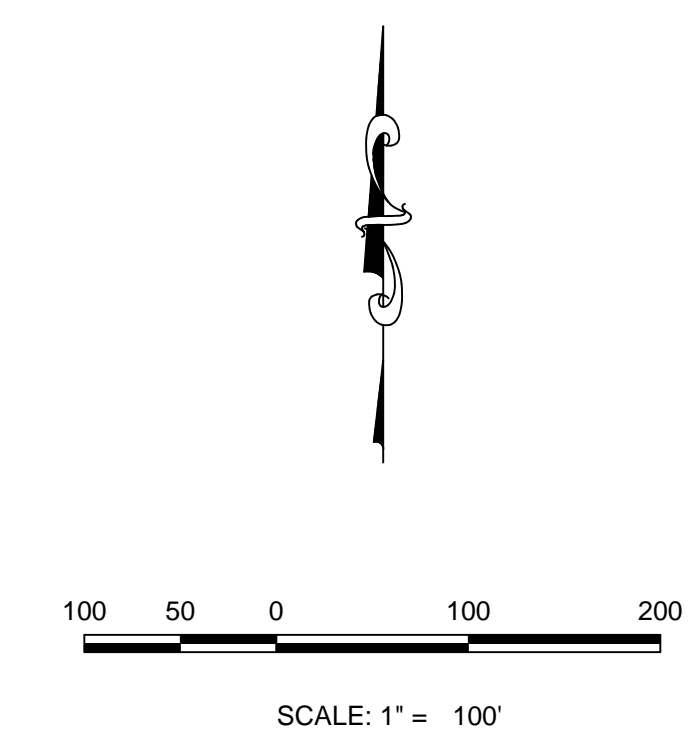
SWMM BASIN SUMMARY			
Design Point ID	Q5 (CFS)	Q100 (CFS)	%
A-1	11.86	32.59	
A-2	19.60	53.08	
A-3	7.60	21.76	
A-4	5.01	16.11	
B-1	20.87	66.84	
B-2	26.81	74.30	
C-1	14.00	39.86	
OS-1	1.82	9.80	
OS-2	1.62	8.90	
OS-3	1.02	5.59	
OS-4	0.31	1.87	
OS-5	1.55	7.82	

POND A	
Description	
Drainage Area (FT)	174.49
Percent Imperviousness (%)	37.56
WQCV (AC-FT)	2.52
EURV Volume (including WQCV) (AC-FT)	6.45
EURV Water Surface (FT)	5995.39
100-YR Volume (including EURV) (AC-FT)	11.29
100-yr water surface elevation (FT)	5997.19
Emergency Spillway Crest Elevation (FT)	5997.19
100-year Peak Inflow (CFS)	278.84
100-year Peak Outflow (CFS)	197.00
100-year Peak Allowable (CFS)	204.47

POND B	
Description	
Drainage Area (FT)	23.2
Percent Imperviousness (%)	47.36
WQCV (AC-FT)	0.39
EURV Volume (including WQCV) (AC-	



POND A	
Description	
Drainage Area (FT)	174.49
Percent Imperviousness (%)	37.56
WQCV (AC-FT)	2.52
EURV Volume (including WQVC) (AC-FT)	6.45
EURV Water Surface (FT)	5995.39
100-YR Volume (including EURV) (AC-FT)	11.29
100-yr water surface elevation (FT)	5997.19
Emergency Spillway Crest Elevation (FT)	5997.19
100-year Peak Inflow (CFS)	278.84
100-year Peak Outflow (CFS)	197.00
100-year Peak Allowable (CFS)	204.47



KEYMAP
N.T.S.

Note:
1) 0% slope indicates sump inlet.

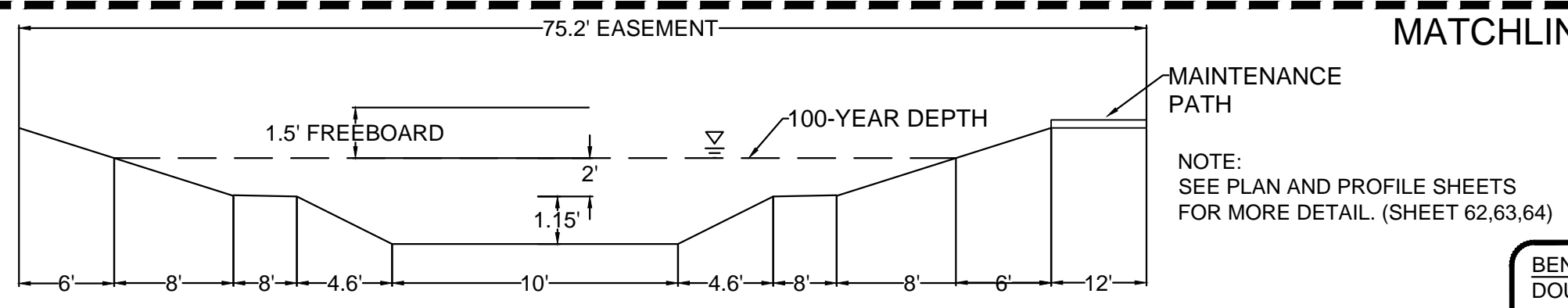
BASIN ID	AREA (AC)	Imperviousness %	DIRECT FLOW		Street Type	Slope %
			Q2 (CFS)	Q100 (CFS)		
A1	4.11	43.77	3.84	17.73	Local	2.00
A2	1.84	52.16	2.22	9.10	Local	0.00
A3	3.23	48.80	3.16	13.54	Local	0.00
A4	4.07	34.03	2.78	15.39	Local	0.00
A5	2.04	49.08	2.27	9.70	Local	0.00
A6	4.96	35.28	3.58	19.32	Local	1.50
A7	3.96	50.41	4.44	18.62	Local	4.00
A8	2.86	52.68	3.45	14.07	Local	0.00
A9	3.44	50.33	3.75	15.73	Arterial	2.00
A10	0.72	61.44	1.12	4.14	Arterial	0.00
A11	2.39	53.79	2.92	11.75	Local	2.00
A12	2.96	48.02	3.22	13.95	Local	1.50
A13	5.13	47.44	5.03	21.94	Local	5.00
A14	1.43	54.86	1.94	7.68	Local	0.00
A15	7.15	26.55	3.58	23.96	Arterial	0.00
A16	0.75	76.70	1.39	4.52	Local	2.00
A17	3.76	52.91	4.19	17.02	Local	2.00
A18	2.54	52.87	2.95	11.99	Local	2.00
A19	2.09	51.95	2.51	10.32	Local	4.00
A20	2.04	49.09	2.28	9.72	Local	2.00
A21	3.02	52.59	3.69	15.04	Local	1.50
A22	3.07	74.76	6.17	20.24	Local	2.50

Design Point ID	CUMULATIVE FLOW	
	Q2 (CFS)	Q100 (CFS)
1A	3.84	17.73
1B	5.04	60.61
1C	18.94	72.95
1D	22.01	88.25
1E	4.69	74.09
1F	9.74	45.15
1G	4.44	61.21
1H	24.90	99.54
1I	3.75	15.73
1J	7.60	40.45
1K	2.92	11.75
1L	3.22	13.95
1M	9.77	37.49
1N	11.20	49.77
1O	3.58	23.96
1P	5.05	21.53
1Q	6.90	27.93
1R	2.95	11.99
1S	2.51	10.32
1T	6.64	44.92
1U	6.71	27.72
1	11.54	45.92
2	15.83	42.02
3	15.88	(Not Relevant for 100 year)
4	19.35	41.99

- NOTE:
- THE TOWN OF PARKER REVIEW CONSTITUTES GENERAL COMPLIANCE WITH THE TOWN'S STANDARDS AND APPROVED VARIANCES, SUBJECT TO THESE PLANS BEING STAMPED, SIGNED, AND DATED BY THE PROFESSIONAL ENGINEER OF RECORD. REVIEW BY THE TOWN DOES NOT CONSTITUTE APPROVAL OF THE PLAN DESIGN OR ACCURACY AND CORRECTNESS OF ENGINEERING CALCULATIONS. ERRORS IN THE DESIGN OR CALCULATIONS REMAIN THE RESPONSIBILITY OF THE REGISTERED PROFESSIONAL ENGINEER WHOSE STAMP AND SIGNATURE ARE AFFIXED TO THIS DOCUMENT.
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 - DROP STRUCTURE DETAILS ARE PROVIDED IN CHANNEL PLAN AND PROFILE SHEET.

LEGEND

	DESIGN POINT
	XX = BASIN ID A = AREA
	R2= 2 YR RUNOFF CO-EFF R100= 100 YR RUNOFF CO-EFF
	DETENTION POND
	CHANNEL DROP STRUCTURE
	BASIN LINE
	MAJOR BASIN LINE
	PROPOSED MAJOR CONTOURS
	PROPOSED MINOR CONTOURS
	EXISTING MAJOR CONTOURS
	EXISTING MINOR CONTOURS
	PROPOSED FLOW ARROW



BENCHMARK
DOUGLAS COUNTY CONTROL POINT KNOWN AS 1.060032, BEING A 3-1/4" ALUMINUM CAP, BEING LOCATED IN THE SOUTHWEST QUARTER OF SECTION 33, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN, HAVING A PUBLISHED ELEVATION OF 1799.2870 METERS (5903.13 FEET) NAVD '88 DATUM.

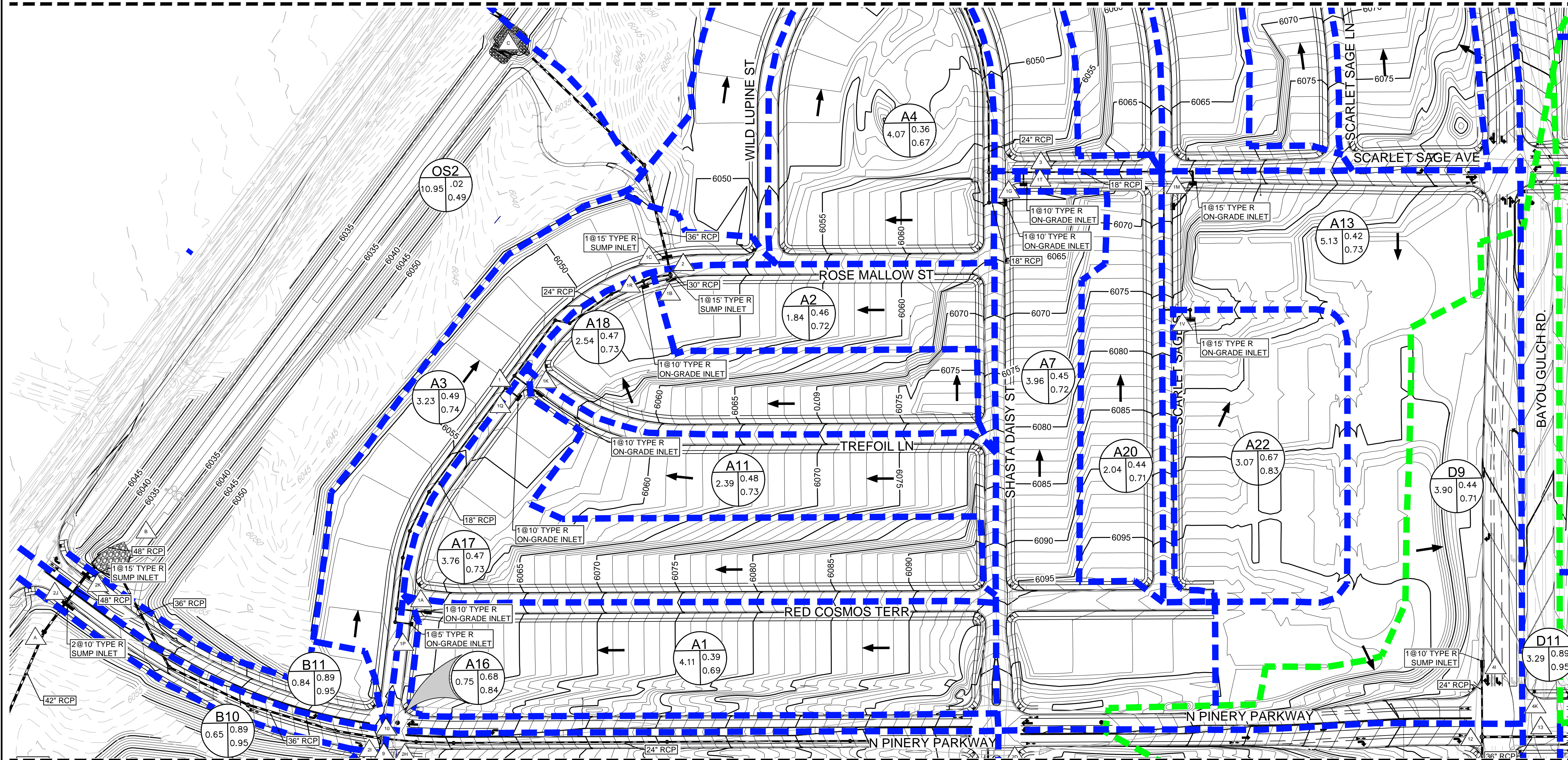
BASIS OF BEARINGS:
THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 9 BEING MONUMENTED AT THE NORTHEAST CORNER OF SAID SECTION 9 BY A 3-1/4" ALUMINUM CAP STAMPED LS 23053 AND AT THE EAST QUARTER CORNER OF SAID SECTION 9 BY A 2-1/2" ALUMINUM CAP STAMPED LS 6935 BEING CONSIDERED TO BEAR SOUTH 00°15'06" EAST, 2648.70 FEET.

N:\PROJECTS\SSR\SSR\ENGINEERING\DRAINAGE\MAPS\DRAINAGE_MAP_FINAL.DWG, RSP UNK, 2/1/2018 1:12 PM

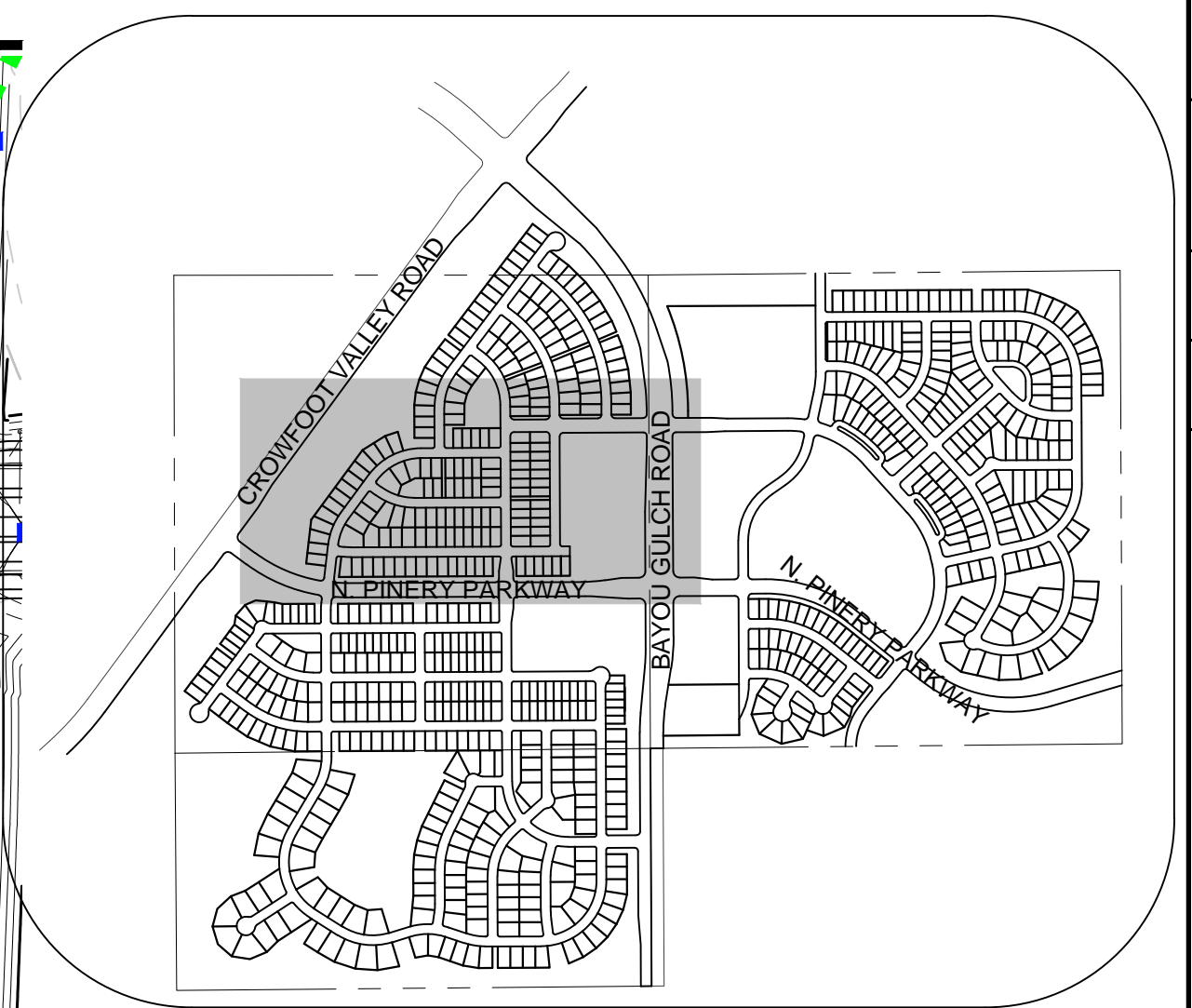
CALL 811
TWO WORKING DAYS
BEFORE YOU DIG
UNCCC 1-800-922-1987

10333 E. Dry Creek Rd. Suite 240 Englewood, CO 80152 Tel: (720) 482-9526 Fax: (720) 482-9546		ESX MANAGEMENT 7253 South Alton Way CENTENNIAL, CO 80112	TRAILS AT CROWFOOT FINAL DRAINAGE MAP DRAINAGE MAP	SCALE: AS SHOWN FILE NO: 8130283701	DRAWN BY: AYK CHECKED BY: JU DATE: MAY 2017	PREPARED UNDER THE SUPERVISION OF MARK SCHEURER COLORADO P.E. 48988					
<table border="1"> <tr><td>No.</td><td>Revisions</td><td>Date</td><td>Appr.</td><td>Date</td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>		No.	Revisions	Date	Appr.	Date					
No.	Revisions	Date	Appr.	Date							

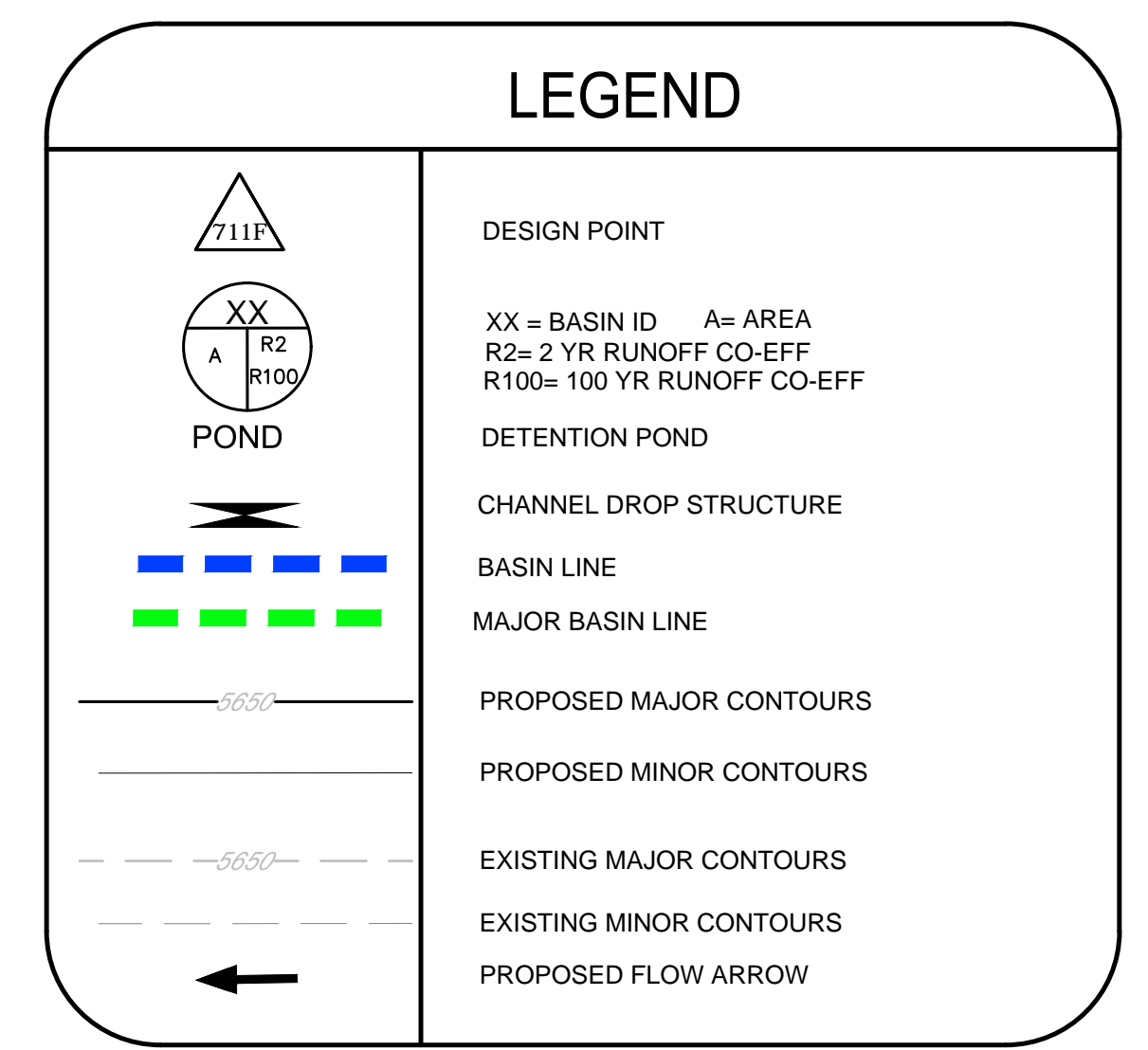
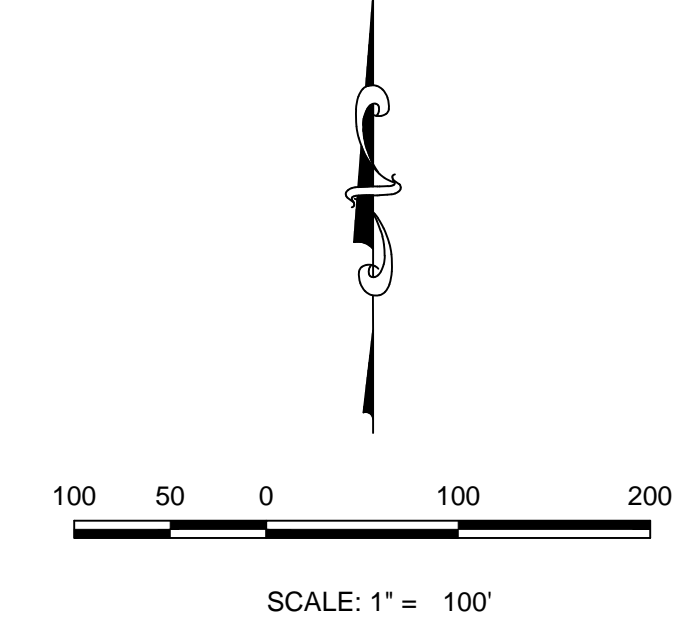
MATCHLINE - SHEET 2



MATCHLINE - SHEET 4



KEYMAP
N.T.S.



- NOTE:
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Note: 1) 0% slope indicates sump inlet.

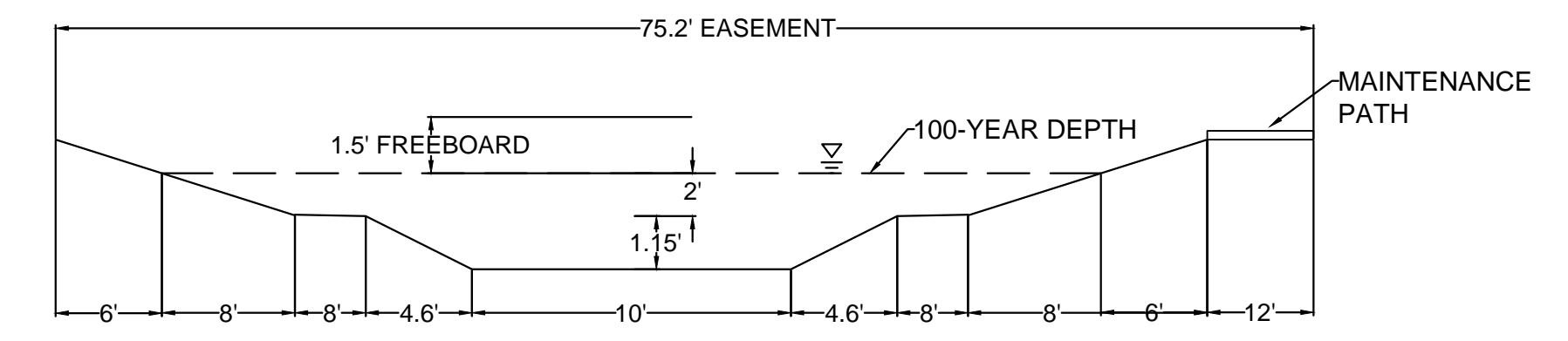
DIRECT FLOW						
BASIN ID	AREA (AC)	Imperviousness %	Q2 (CFS)	Q100 (CFS)	Street Type	Slope %
A1	4.11	43.77	3.84	17.73	Local	2.00
A2	1.84	52.16	2.22	9.10	Local	0.00
A3	3.23	48.80	3.16	13.54	Local	0.00
A4	4.07	34.03	2.78	15.39	Local	0.00
A5	2.04	49.08	2.27	9.70	Local	0.00
A6	4.96	35.28	3.58	19.32	Local	1.50
A7	3.96	50.41	4.44	18.62	Local	4.00
A8	2.86	52.68	3.45	14.07	Local	0.00
A9	3.44	50.33	3.75	15.73	Arterial	2.00
A10	0.72	61.44	1.12	4.14	Arterial	0.00
A11	2.39	53.79	2.92	11.75	Local	2.00
A12	2.96	48.02	3.22	13.95	Local	1.50
A13	5.13	47.44	5.03	21.94	Local	5.00
A14	1.43	54.86	1.94	7.68	Local	0.00
A15	7.15	26.55	3.58	23.96	Arterial	0.00
A16	0.75	76.70	1.39	4.52	Local	2.00
A17	3.76	52.91	4.19	17.02	Local	2.00
A18	2.54	52.87	2.95	11.99	Local	2.00
A19	2.09	51.95	2.51	10.32	Local	4.00
A20	2.04	49.09	2.28	9.72	Local	2.00
A21	3.02	52.59	3.69	15.04	Local	1.50
A22	3.07	74.76	6.17	20.24	Local	2.50

Note: 1) 0% slope indicates sump inlet.

DIRECT FLOW						
BASIN ID	AREA (AC)	Imperviousness %	Q2 (CFS)	Q100 (CFS)	Street Type	Slope %
C1	10.07	45.10	8.72	39.44	Local	0.00
D1	5.94	42.41	5.34	25.23	Local	0.00
D2	5.33	46.14	5.58	24.83	Local	5.00
D3	3.66	43.82	3.28	15.11	Local	5.00
D4	2.91	42.33	2.45	11.57	Local	3.00
D5	6.97	33.88	4.29	23.81	Arterial	0.00
D6	2.57	42.99	2.30	10.74	Arterial	6.00
D7	2.58	42.09	2.48	11.76	Local	4.00
D8	0.85	51.73	1.06	4.38	Local	5.00
D9	3.90	49.27	4.06	17.30	Arterial	0.00
D10	4.80	50.52	5.60	23.45	Local	0.00
D11	3.29	84.30	6.19	19.00	Arterial	0.00
D12	1.13	84.30	2.13	6.53	Arterial	1.50

CUMULATIVE FLOW		
Design Point ID	Q2 (CFS)	Q100 (CFS)
1A	3.84	17.73
1B	5.04	60.61
1C	18.94	72.95
1D	22.01	88.25
1E	4.69	74.09
1F	9.74	45.15
1G	4.44	61.21
1H	24.90	99.54
1I	3.75	15.73
1J	7.60	40.45
1K	2.92	11.75
1L	3.22	13.95
1M	9.77	37.49
1N	11.20	49.77
1O	3.58	23.96
1P	5.05	21.53
1Q	6.90	27.93
1R	2.95	11.99
1S	2.51	10.32
1T	6.64	44.92
1U	6.71	27.72
1	11.54	45.92
2	15.83	42.02
3	15.88	(Not Relavant for 100 year)
4	19.35	41.99

CUMULATIVE FLOW		
Design Point ID	Q2 (CFS)	Q100 (CFS)
4A	18.01	80.94
4B	5.58	24.83
4C	3.28	15.11
4D	5.63	26.26
4E	8.32	42.18
4F	5.19	24.34
4G	2.48	11.76
4H	1.06	4.38
4I	4.06	17.30
4J	10.66	45.70
4K	6.19	19.00
4L	2.94	10.02
11	12.69	56.80
12	11.38	55.22
13	15.66	68.43



CHANNEL SECTION A-A
NO TO SCALE

BENCHMARK
DOUGLAS COUNTY CONTROL POINT KNOWN AS 1.060032, BEING A 3-3/4" ALUMINUM CAP, BEING LOCATED IN THE SOUTHWEST QUARTER OF SECTION 33, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN, HAVING A PUBLISHED ELEVATION OF 1799.2870 METERS (5903.13 FEET) NAVD '88 DATUM.

BASIS OF BEARINGS:
THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 9 BEING MONUMENTED AT THE NORTHEAST CORNER OF SAID SECTION 9 BY A 3-1/4" ALUMINUM CAP STAMPED LS 23053 AND AT THE EAST QUARTER CORNER OF SAID SECTION 9 BY A 2-1/2" ALUMINUM CAP STAMPED LS 6935 BEING CONSIDERED TO BEAR SOUTH 00°15'06" EAST, 2648.70 FEET.

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UNCC 1-800-922-1987

PREPARED UNDER THE SUPERVISION OF
MARK SCHEURER
COLORADO P.E. 48988

10333 E. Dry Creek Rd., Suite 240, Englewood, CO 80152
Tel: (720) 482-9526, Fax: (720) 482-9546

CVL CONSULTANTS

ESX MANAGEMENT
7353 South Alton Way, CENTENNIAL, CO 80112

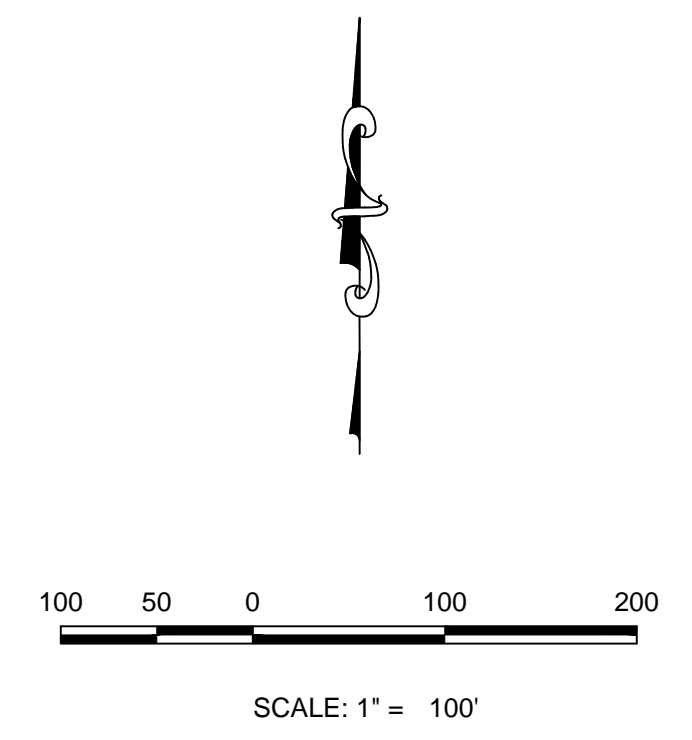
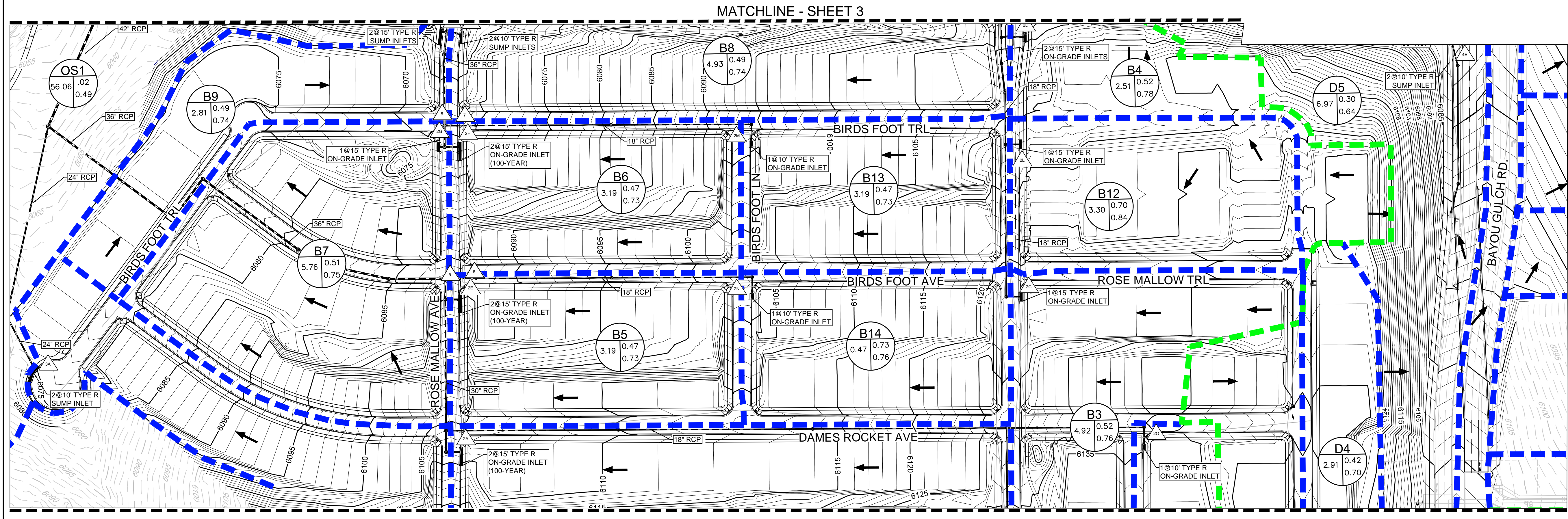
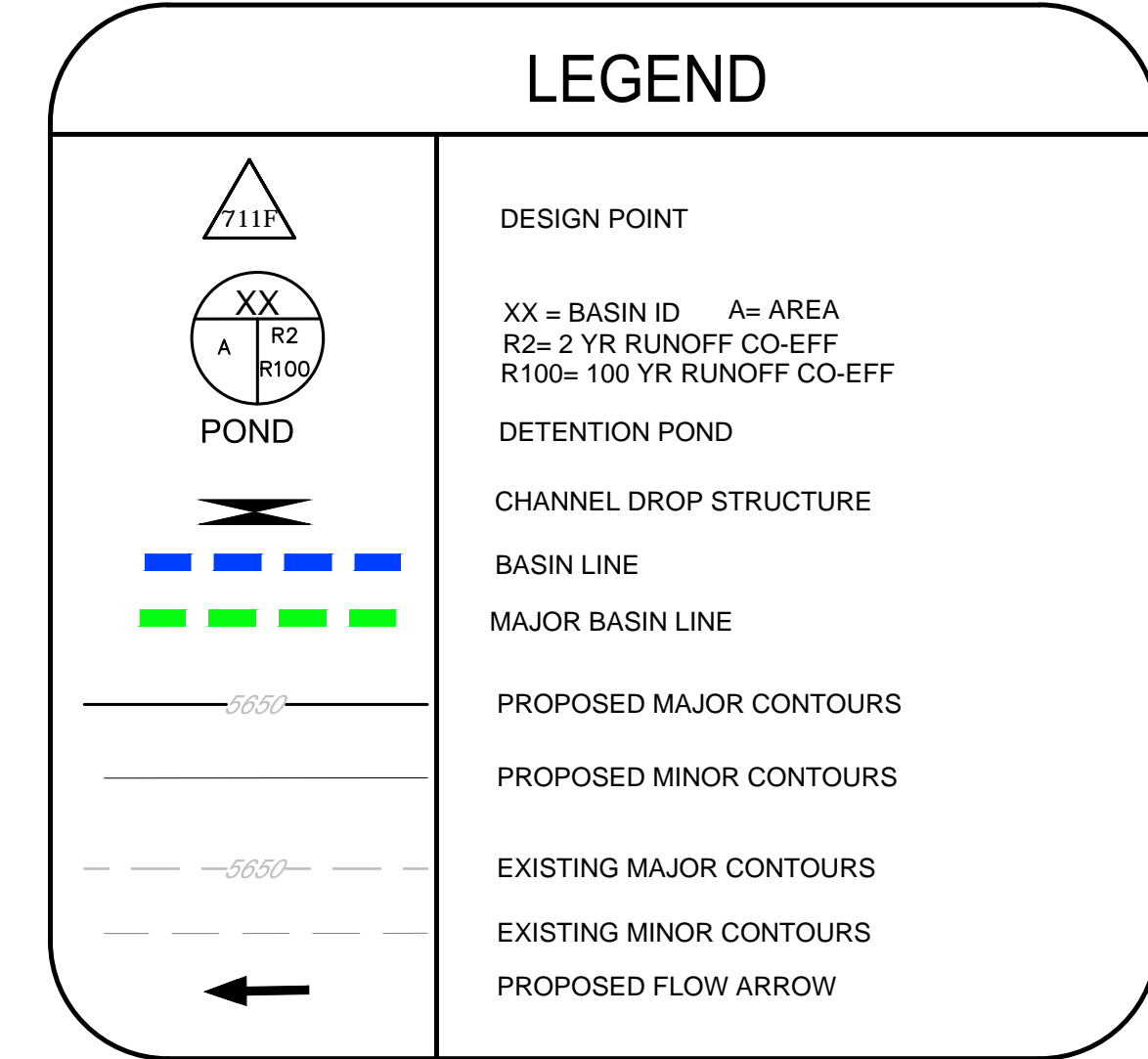
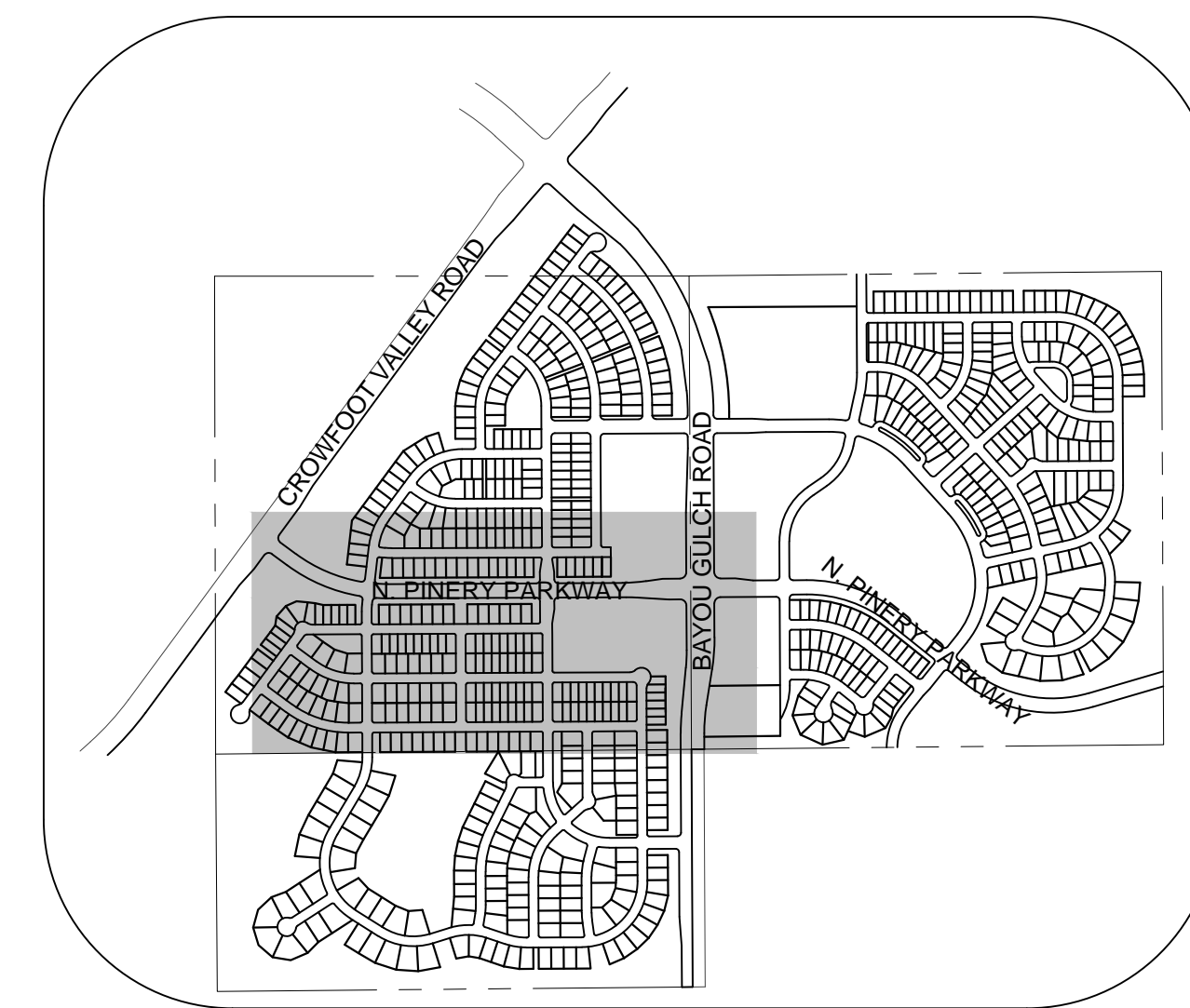
TRAILS AT CROWFOOT
FINAL DRAINAGE MAP
DRAINAGE MAP

SCALE: AS SHOWN
FILE NO: 8130283701

DRAWN BY: AVK
CHECKED BY: JJJ
DATE: MAY 2017

SHEET NUMBER: 3

No.	Revisions	Date	Init.	Appr.	Date



Note: 1) 0% slope indicates sump inlet.

BASIN ID	AREA (AC)	DIRECT FLOW		Street Type	Slope %	
		Imperviousness %	Q2 (CFS)			Q100 (CFS)
B1	21.00	23.33	8.48	62.92	Local	7.00
B2	3.13	51.76	3.82	15.75	Local	3.00
B3	4.92	50.31	5.58	23.45	Local	3.00
B4	2.51	58.47	3.16	12.02	Local	5.00
B5	3.19	53.20	3.88	15.72	Local	6.00
B6	3.19	53.20	3.88	15.72	Local	6.00
B7	5.76	49.66	5.79	24.54	Local	6.00
B8	4.93	46.94	4.95	21.81	Res. Blvd	0.00
B9	2.81	49.17	2.94	12.55	Local	0.00
B10	0.65	76.70	1.28	4.14	Res. Blvd	0.00
B11	0.84	76.70	1.59	5.15	Res. Blvd	0.00
B12	3.30	75.52	6.18	20.16	Local	3.00
B13	3.19	53.20	3.88	15.72	Local	2.00
B14	3.19	53.20	3.88	15.72	Local	2.00
B15	2.01	53.11	2.50	10.13	Local	1.00

Note: 1) 0% slope indicates sump inlet.

BASIN ID	AREA (AC)	DIRECT FLOW		Street Type	Slope %	
		Imperviousness %	Q2 (CFS)			Q100 (CFS)
C1	10.07	45.10	8.72	39.44	Local	0.00
D1	5.94	42.41	5.34	25.23	Local	0.00
D2	5.33	46.14	5.58	24.83	Local	5.00
D3	3.66	43.82	3.28	15.11	Local	5.00
D4	2.91	42.33	2.45	11.57	Local	3.00
D5	6.97	33.88	4.29	23.81	Arterial	0.00
D6	2.57	42.99	2.30	10.74	Arterial	6.00
D7	2.58	42.09	2.48	11.76	Local	4.00
D8	0.85	51.73	1.06	4.38	Local	5.00
D9	3.90	49.27	4.06	17.30	Arterial	0.00
D10	4.80	50.52	5.60	23.45	Local	0.00
D11	3.29	84.30	6.19	19.00	Arterial	0.00
D12	1.13	84.30	2.13	6.53	Arterial	1.50

CUMULATIVE FLOW		
Design Point	Q2 (CFS)	Q100 (CFS)
2A	13.11	74.41
2B	6.15	15.75
2C	5.58	33.21
2D	13.83	60.55
2E	3.88	76.36
2F	3.88	29.09
2G	5.79	24.54
2H	4.95	21.81
2I	2.94	35.69
2J	26.73	169.56
2K	27.76	172.83
2L	10.97	50.07
2M	3.88	15.72
2N	3.88	15.72
2O	2.50	10.13
5	18.73	76.25
6	7.44	(Not Relieved for 100 year)
7	7.40	(Not Relieved for 100 year)
9	19.80	84.75
10	32.55	84.62

CUMULATIVE FLOW		
Design Point	Q2 (CFS)	Q100 (CFS)
3A	8.95	54.35
4A	18.01	80.94
4B	5.58	24.83
4C	3.28	15.11
4D	5.63	26.26
4E	8.32	42.18
4F	5.19	24.34
4G	2.48	11.76
4H	1.06	4.38
4I	4.06	17.30
4J	10.66	45.70
4K	6.19	19.00
4L	2.94	10.02
11	12.69	56.80
12	11.38	55.22
13	15.66	68.43

- NOTE:
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UNCC 1-800-922-1987

BENCHMARK
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PREPARED UNDER THE SUPERVISION OF
MARK SCHEURER
COLORADO P.E. 48988

10333 E. Dry Creek Rd., Suite 240, Englewood, CO 80152
Tel: (720) 482-9526 Fax: (720) 482-9546

CVL CONSULTANTS

ESX MANAGEMENT
7253 South Alton Way, CENTENNIAL, CO 80112

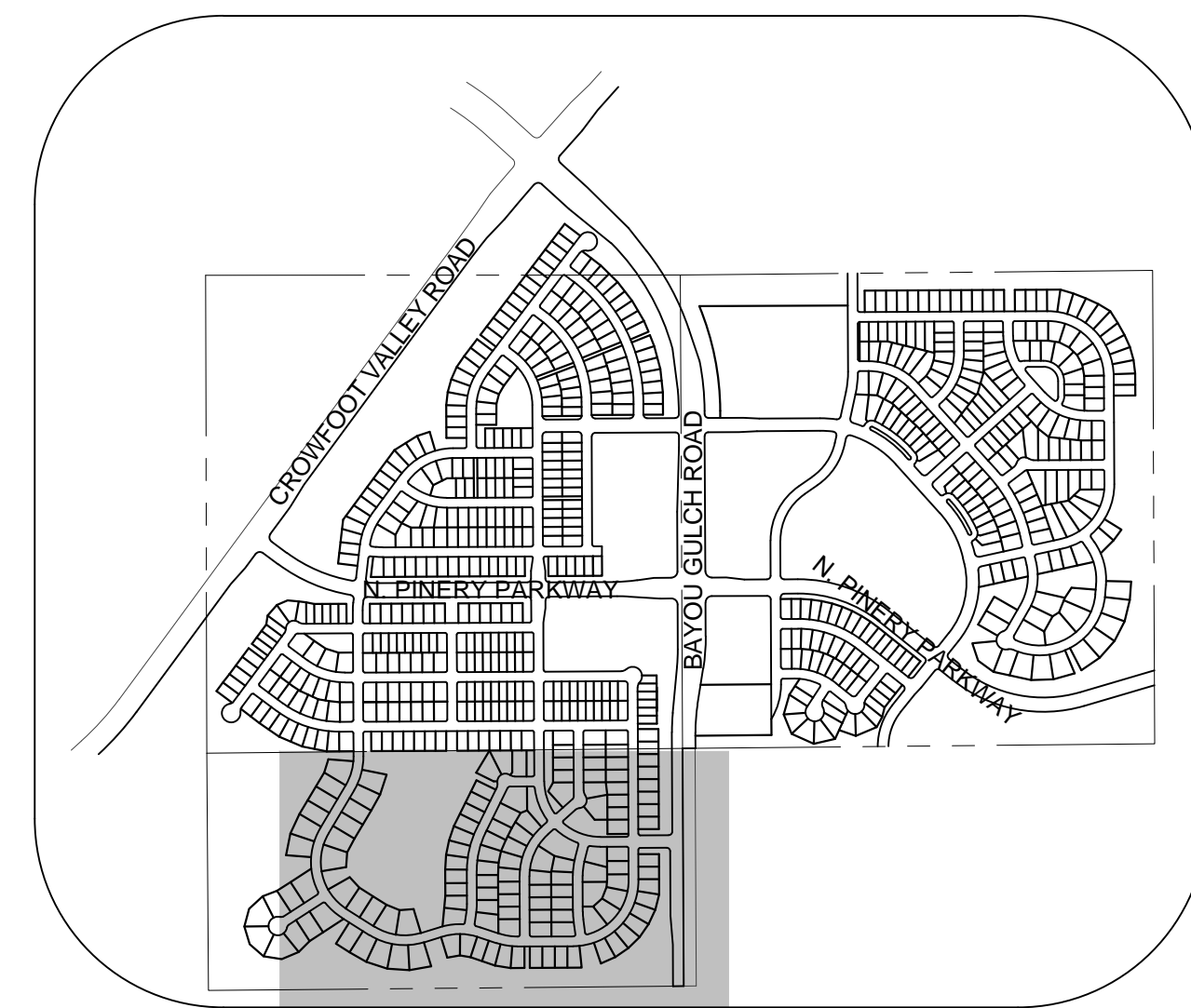
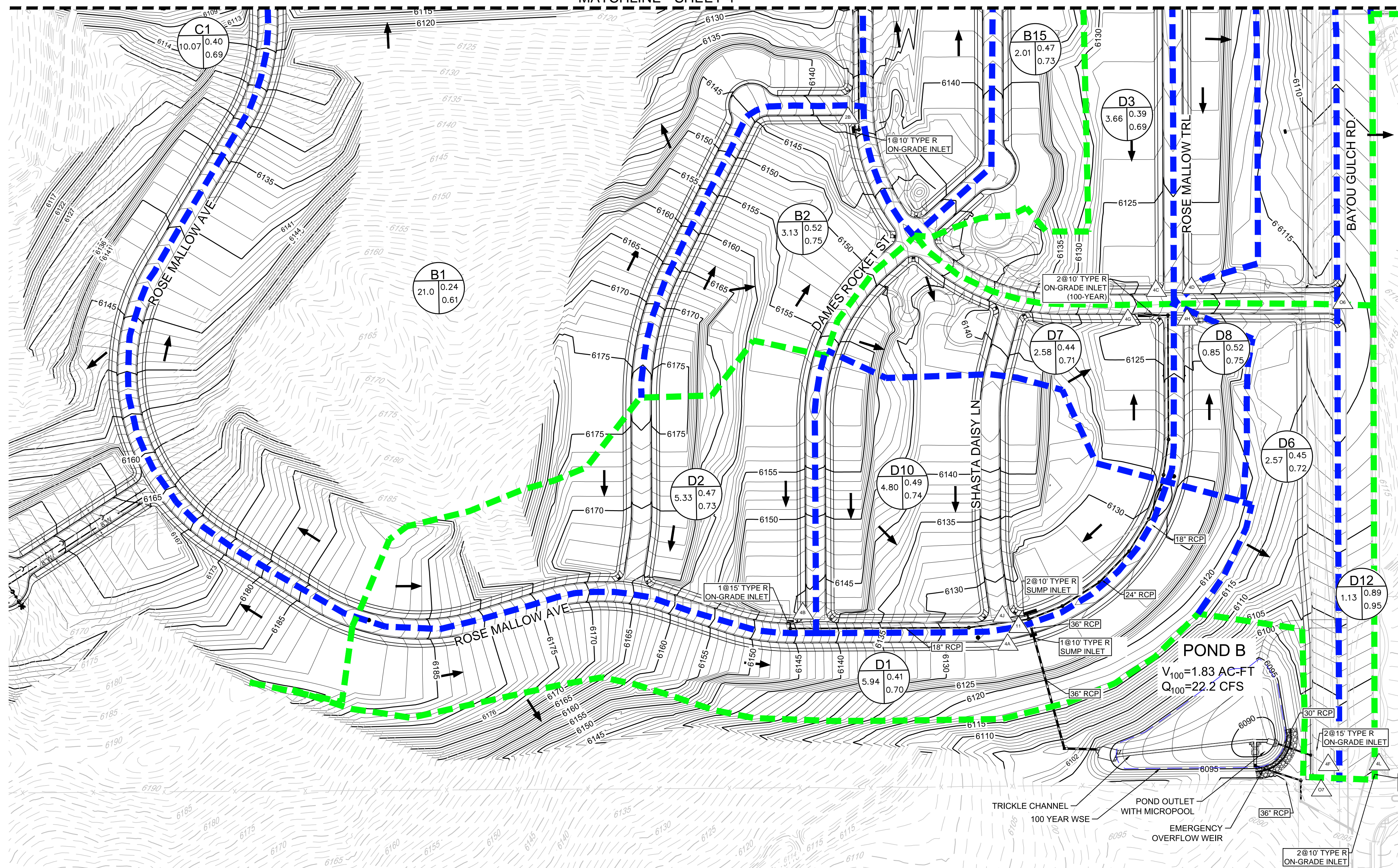
TRAILS AT CROWFOOT FINAL DRAINAGE MAP
DRAINAGE MAP

SCALE: AS SHOWN
DRAWN BY: AYK
CHECKED BY: JJ
DATE: MAY 2017

FILE NO: 8130283701

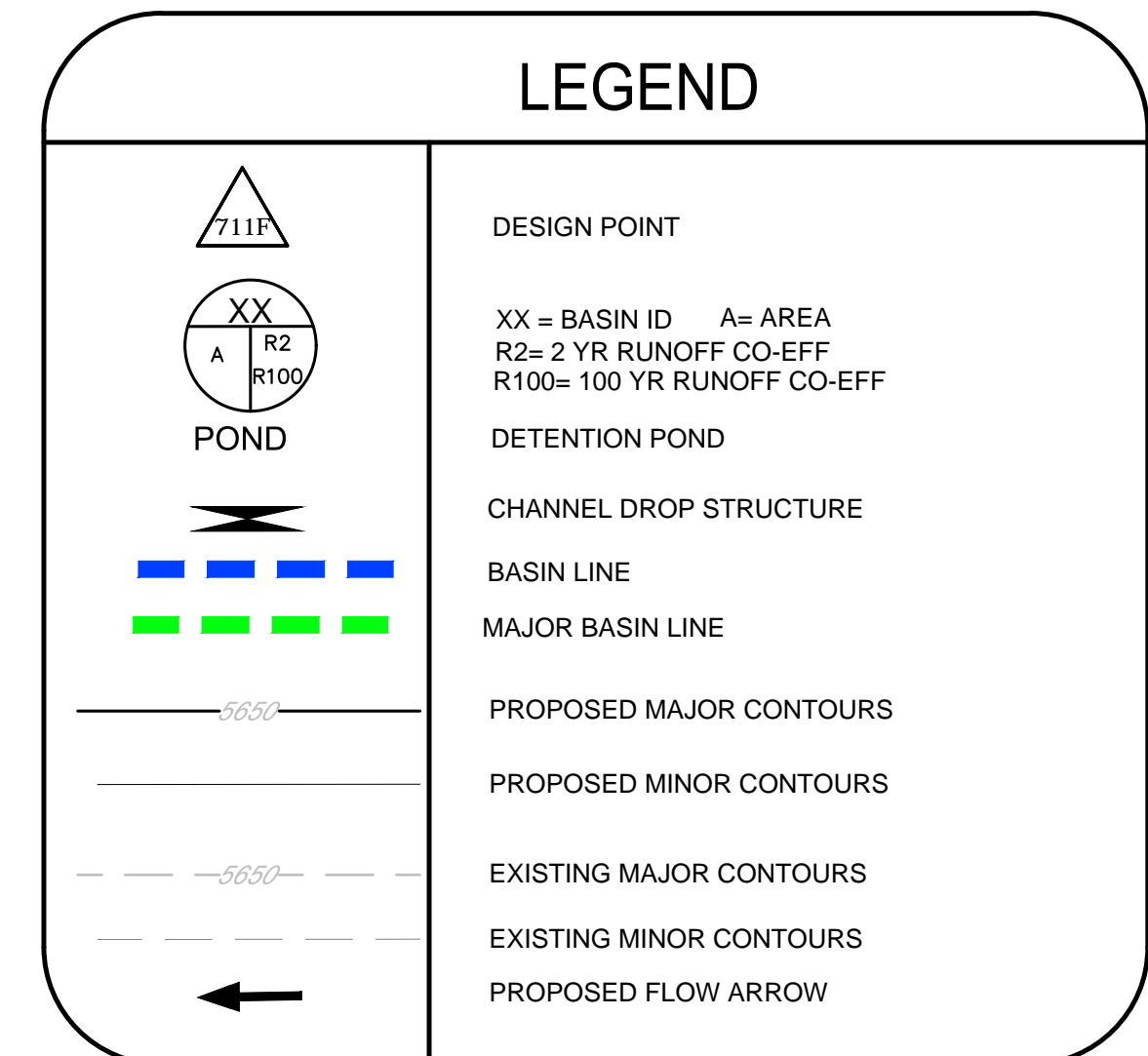
SHEET NUMBER: 4

No.	Revisions	Date	Appr.	Date



KEYMAP
N.T.S.

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Note: 1) 0% slope indicates sump inlet.

DIRECT FLOW						
BASIN ID	AREA (AC)	Imperviousness %	Q2 (CFS)	Q100 (CFS)	Street Type	Slope %
B1	21.00	23.33	8.48	62.92	Local	7.00
B2	3.13	51.76	3.82	15.75	Local	3.00
B3	4.92	50.31	5.58	23.45	Local	3.00
B4	2.51	58.47	3.16	12.02	Local	5.00
B5	3.19	53.20	3.88	15.72	Local	6.00
B6	3.19	53.20	3.88	15.72	Local	6.00
B7	5.76	49.66	5.79	24.54	Local	6.00
B8	4.93	46.94	4.95	21.81	Res. Blvd	0.00
B9	2.81	49.17	2.94	12.55	Local	0.00
B10	0.65	76.70	1.28	4.14	Res. Blvd	0.00
B11	0.84	76.70	1.59	5.15	Res. Blvd	0.00
B12	3.30	75.52	6.18	20.16	Local	3.00
B13	3.19	53.20	3.88	15.72	Local	2.00
B14	3.19	53.20	3.88	15.72	Local	2.00
B15	2.01	53.11	2.50	10.13	Local	1.00

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DIRECT FLOW						
BASIN ID	AREA (AC)	Imperviousness %	Q2 (CFS)	Q100 (CFS)	Street Type	Slope %
C1	10.07	45.10	8.72	39.44	Local	0.00
D1	5.94	42.41	5.34	25.23	Local	0.00
D2	5.33	46.14	5.58	24.83	Local	5.00
D3	3.66	43.82	3.28	15.11	Local	5.00
D4	2.91	42.33	2.45	11.57	Local	3.00
D5	6.97	33.88	4.29	23.81	Arterial	0.00
D6	2.57	42.99	2.30	10.74	Arterial	6.00
D7	2.58	42.09	2.48	11.76	Local	4.00
D8	0.85	51.73	1.06	4.38	Local	5.00
D9	3.90	49.27	4.06	17.30	Arterial	0.00
D10	4.80	50.52	5.60	23.45	Local	0.00
D11	3.29	84.30	6.19	19.00	Arterial	0.00
D12	1.13	84.30	2.13	6.53	Arterial	1.50

CUMULATIVE FLOW

Design Point	Q2 (CFS)	Q100 (CFS)
2A	13.11	74.41
2B	6.15	15.75
2C	5.58	33.21
2D	13.83	60.55
2E	3.88	76.36
2F	3.98	29.09
2G	5.79	24.54
2H	4.95	21.81
2I	2.94	35.69
2J	26.73	169.56
2K	27.76	172.83
2L	10.97	50.07
2M	3.88	15.72
2N	3.88	15.72
2O	2.50	10.13
3	18.73	76.25
5	7.44	(Not Retained for 100 year)
7	7.40	(Not Retained for 100 year)
9	19.80	84.75
10	32.55	84.62

CUMULATIVE FLOW

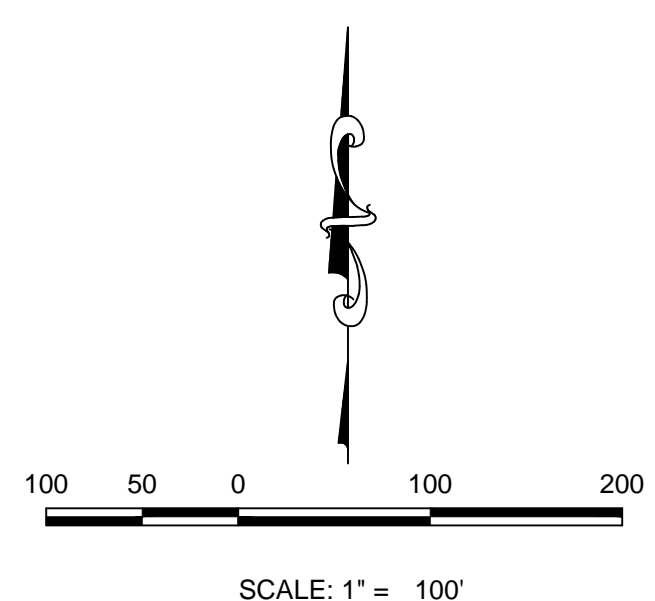
Design Point	Q2 (CFS)	Q100 (CFS)
3A	8.95	54.35
4A	18.01	80.94
4B	5.58	24.83
4C	3.28	15.11
4D	5.63	26.26
4E	8.32	42.18
4F	5.19	24.34
4G	2.48	11.76
4H	1.06	4.38
4I	4.06	17.30
4J	10.66	45.70
4K	6.19	19.00
4L	2.94	10.02
11	12.69	56.80
12	11.38	55.22
13	15.66	68.43

POND B

Description	
Drainage Area (FT)	23.2
Percent Imperviousness (%)	47.36
WQCV (AC-FT)	0.39
EURV Volume (including WQCV) (AC-FT)	1.10
EURV Water Surface (FT)	6092.90
100-YR Volume (including EURV) (AC-FT)	1.83
100-year water surface elevation (FT)	6094.01
Emergency Spillway Crest Elevation (FT)	6094.01
100-year Peak Inflow (CFS)	39.83
100-year Peak Outflow (CFS)	22.20
100-year Peak Allowable (CFS)	31.53

BENCHMARK
DOUGLAS COUNTY CONTROL POINT KNOWN AS 1.060032, BEING A 3-3/4" ALUMINUM CAP BEING LOCATED IN THE SOUTHWEST QUARTER OF SECTION 33, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN, HAVING A PUBLISHED ELEVATION OF 1799.2870 METERS (5903.13 FEET) NAVD '88 DATUM.

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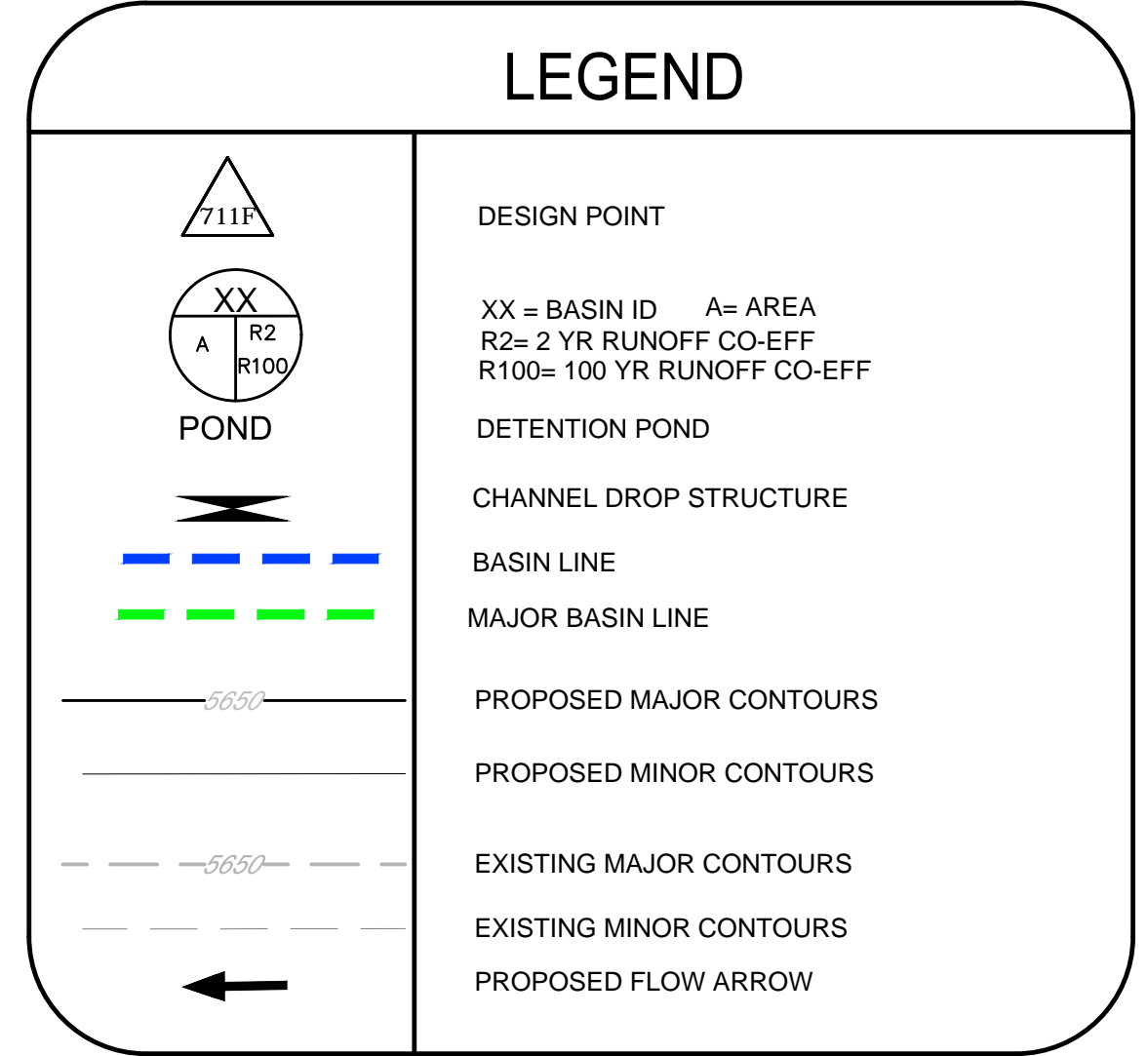
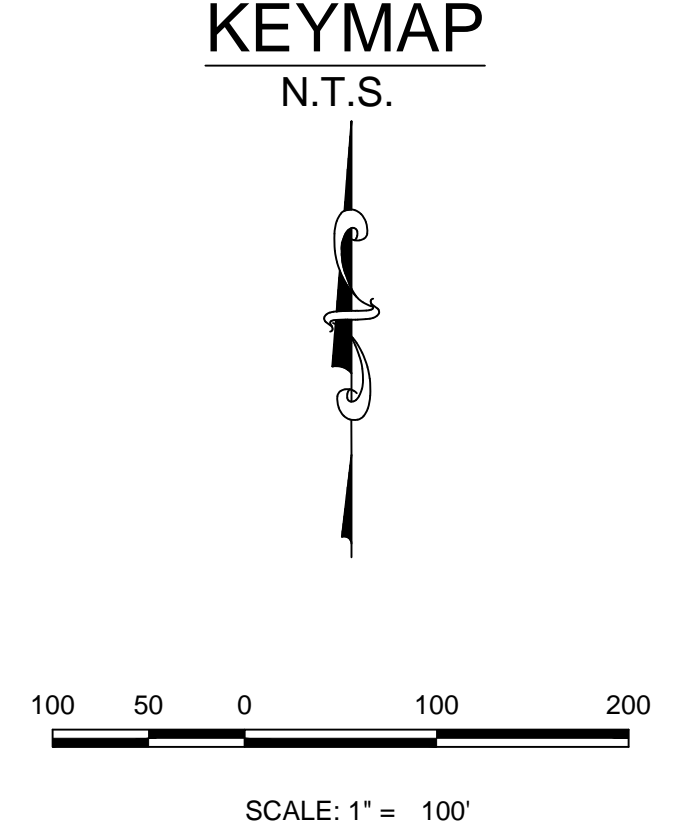
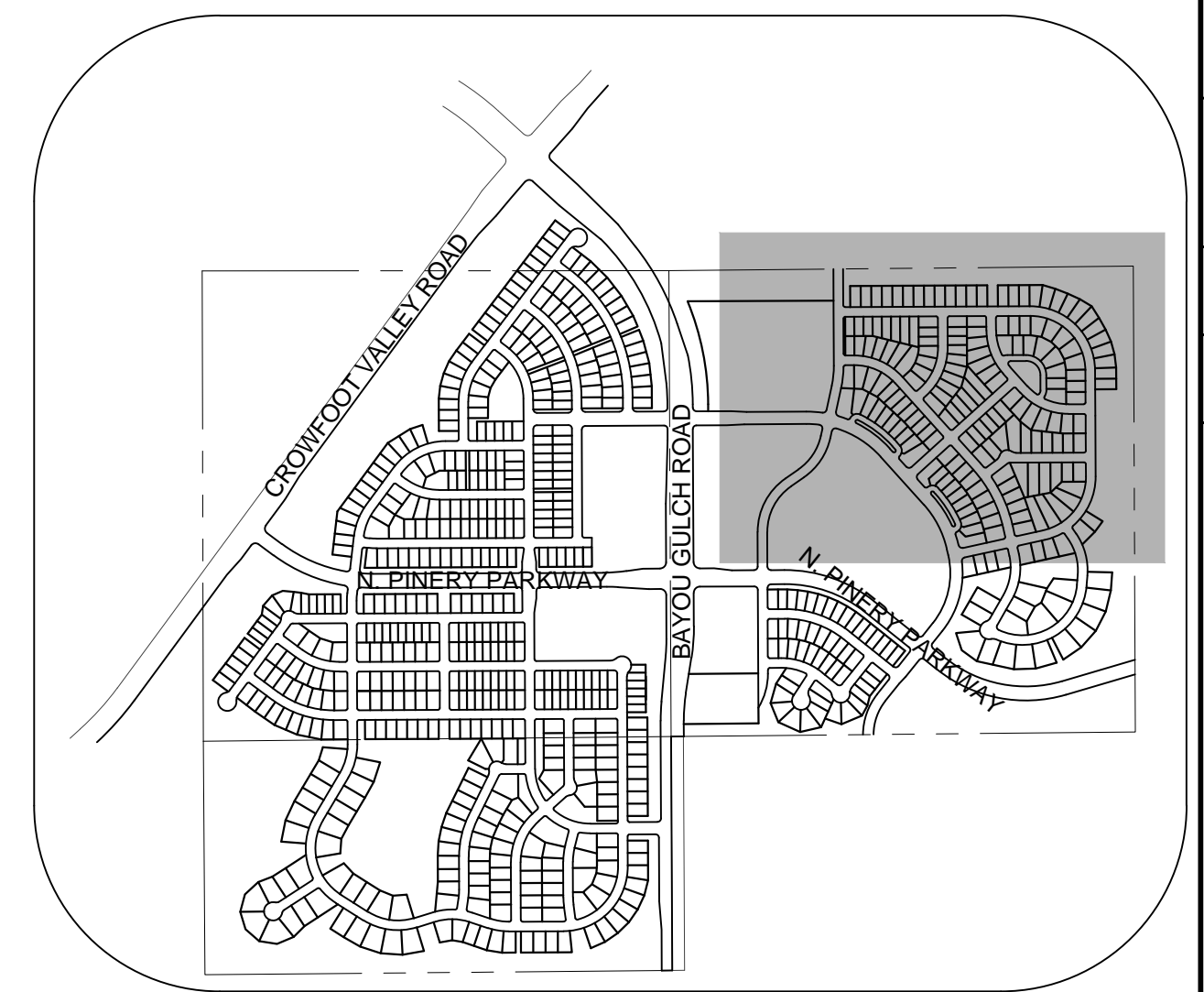
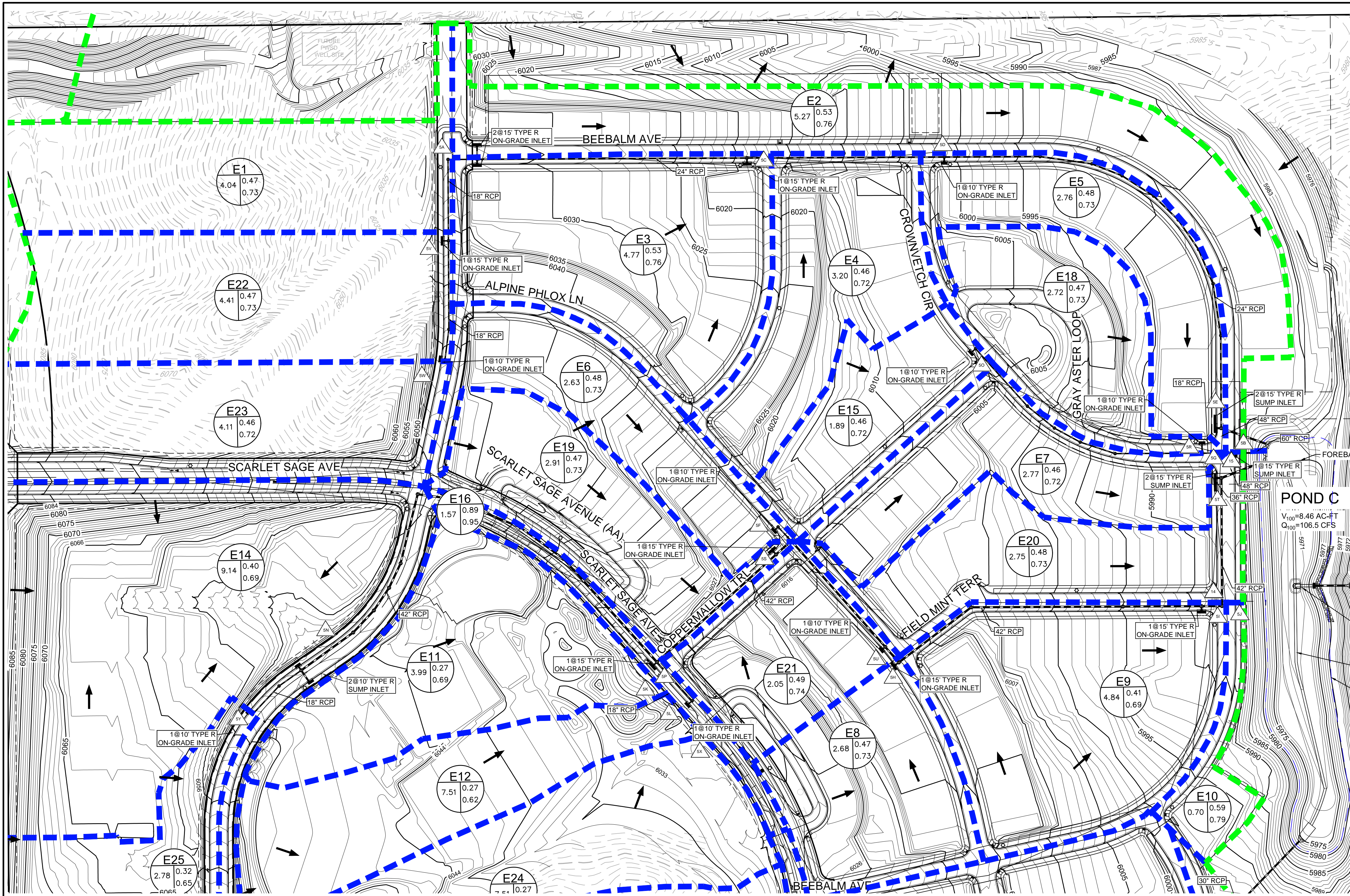
PREPARED UNDER THE SUPERVISION OF

MARK SCHEURER
COLORADO P.E. 48988

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UNCC 1-800-922-1987

SCALE:	AS SHOWN	FILE NO:	8130283701
DRAWN BY:	AVK	CHECKED BY:	JLU
DATE:	MAY 2017		
SHEET NUMBER	5		
TRAILS AT CROWFOOT FINAL DRAINAGE MAP	DRAINAGE MAP		
ESX MANAGEMENT 7353 South Alton Way CENTENNIAL, CO 80112	CVL CONSULTANTS		
10333 E. Dry Creek Rd. Suite 240 Englewood, CO 80150 Tel: (720) 482-9526 Fax: (720) 482-9546	Date: _____ Appr: _____ Date: _____ Init: _____ Date: _____ Revisions: _____ No: _____		



MATCHLINE - SHEET 7

BASIN ID	AREA (AC)	DIRECT FLOW		Street Type	Slope %	
		Imperviousness %	Q2 (CFS)			Q100 (CFS)
E1	4.04	52.65	4.95	20.19	Local	2.70
E2	5.27	52.02	4.71	19.36	Local	0.00
E3	4.77	52.31	5.64	23.07	Local	3.00
E4	3.20	52.07	3.78	14.69	Local	4.00
E5	2.76	53.77	3.09	12.43	Local	0.00
E6	2.63	53.59	3.06	12.34	Local	1.00
E7	2.77	51.99	3.21	13.17	Local	0.00
E8	2.68	53.33	3.13	12.64	Local	2.00
E9	4.84	39.52	3.92	19.46	Local	2.00
E10	0.70	56.03	0.85	3.31	Local	1.00
E11	3.99	30.00	2.48	14.96	Local	1.00
E12	3.28	30.00	2.04	12.33	Local	6.00
E13	4.45	30.00	2.76	16.67	Local	1.00
E14	9.14	44.35	8.62	39.37	Local	0.00
E15	1.89	51.97	2.08	8.55	Local	2.00
E16	1.57	73.60	2.68	8.89	Local	6.00
E17	1.55	73.60	2.64	8.76	Local	1.00
E18	2.72	52.96	3.45	14.00	Local	1.50
E19	2.91	53.40	3.58	14.46	Local	1.20
E20	2.75	53.49	3.12	12.57	Local	2.00
E21	2.05	54.72	2.56	10.18	Local	2.00
E22	4.41	53.09	5.39	21.86	Local	2.70
E23	4.11	51.69	4.81	19.86	Local	2.70
E24	4.23	30.00	2.63	15.87	Local	2.00
E25	2.78	35.90	2.16	11.51	Local	2.00

Design Point ID	CUMULATIVE FLOW	
	Q2 (CFS)	Q100 (CFS)
14	32.04	124.18
15	36.95	142.09
5A	14.28	56.31
5B	9.56	40.76
5C	18.85	70.87
5D	21.89	79.97
5E	23.45	83.44
5F	3.06	12.34
5G	6.16	142.25
5H	29.48	81.28
5I	3.92	19.46
5J	0.85	3.31
5K	2.48	14.96
5L	4.60	27.74
5M	2.76	16.67
5N	10.74	49.99
5O	2.08	8.55
5P	19.53	49.94
5Q	5.06	23.96
5R	4.86	14.00
5S	24.94	67.90
5T	3.12	12.57
5U	2.56	10.18
5V	9.85	39.52
5W	4.81	19.86
5X	2.63	15.87
5Y	2.16	11.51

POND C	
Description	
Drainage Area (FT)	101.09
Percent Imperviousness (%)	44.49
WQCV (AC-FT)	1.61
EURV Volume (including WQCV) (AC-FT)	4.49
EURV Water Surface (FT)	5973.29
100-YR Volume (including EURV) (AC-FT)	8.46
100-year water surface elevation (FT)	5978.14
Emergency Spillway Crest Elevation (FT)	5978.14
100-year Peak Inflow (CFS)	204.00
100-year Peak Outflow (CFS)	106.53
100-year Peak Allowable (CFS)	111.36

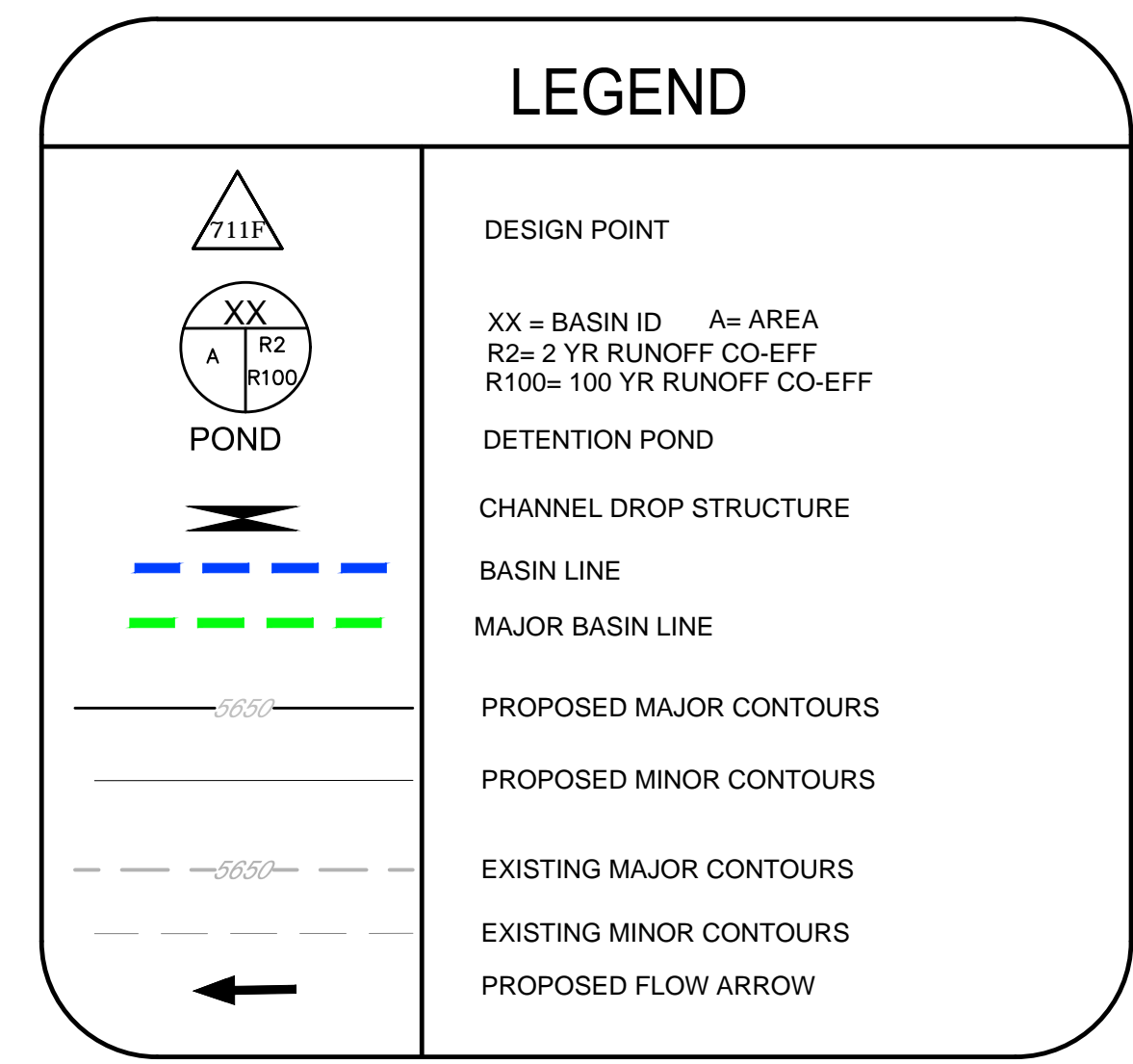
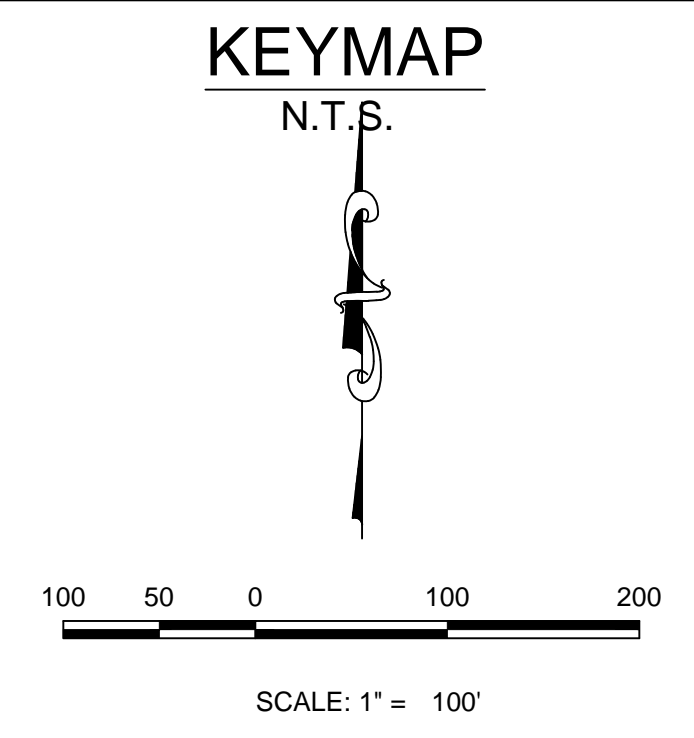
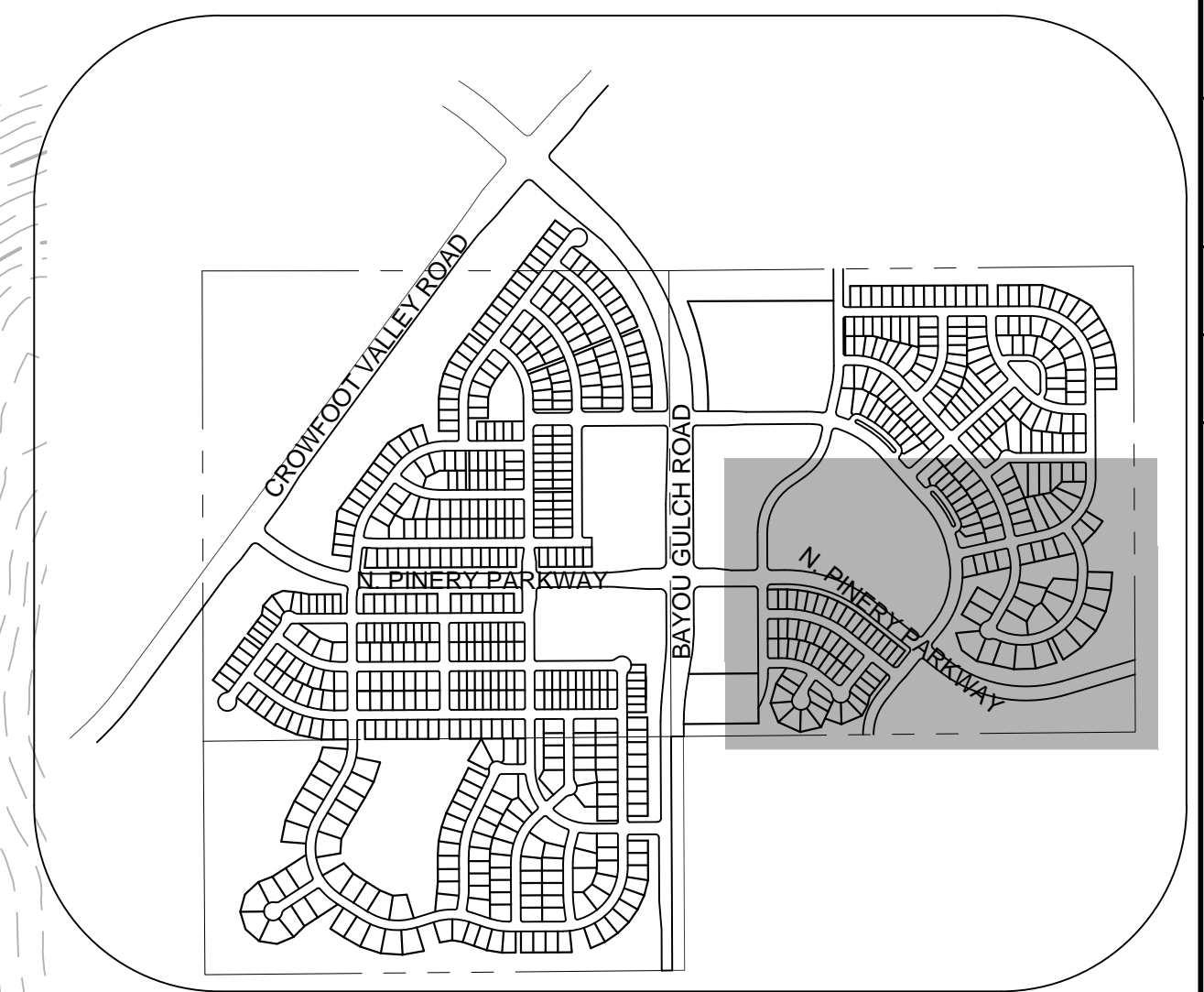
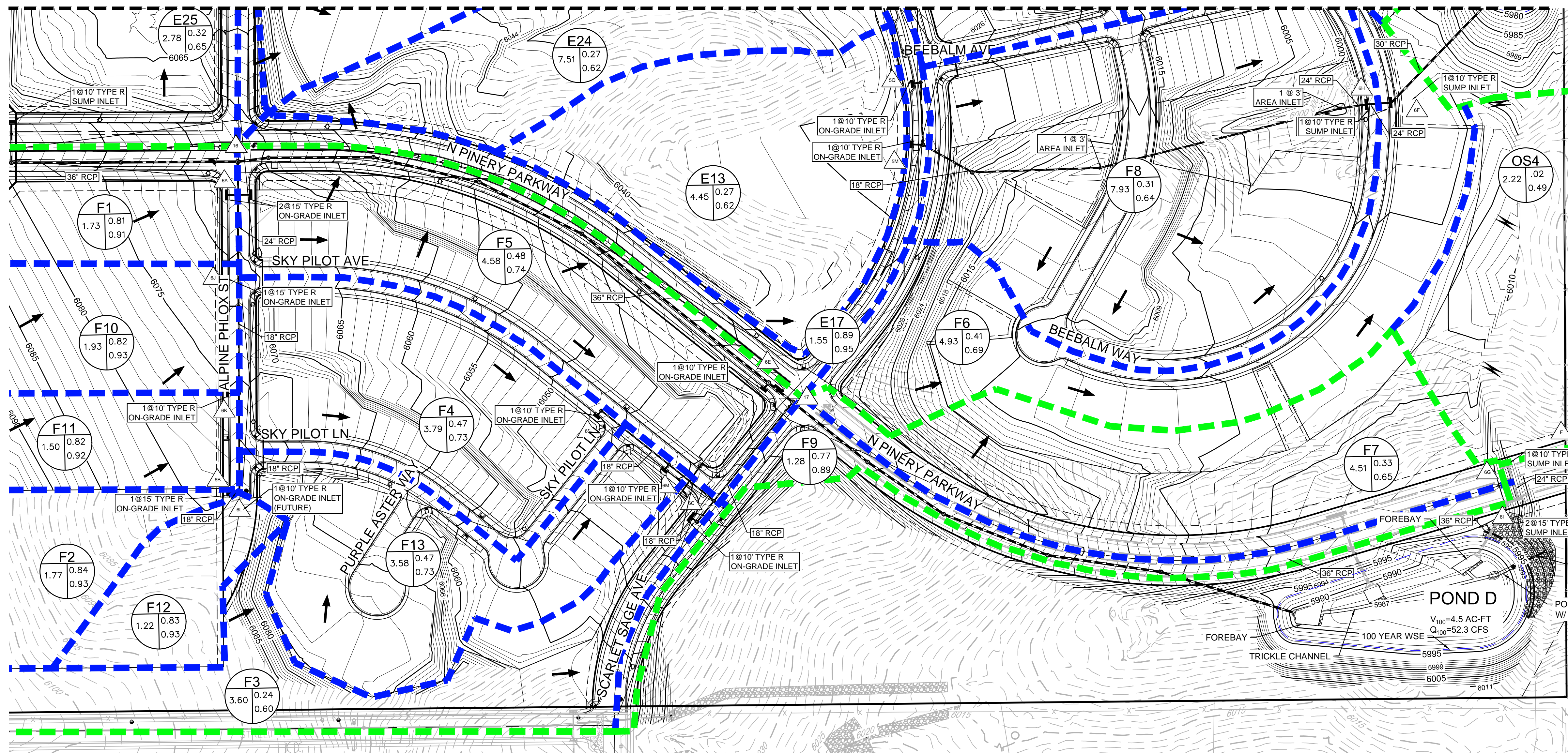
- NOTE:
- THE TOWN OF PARKER REVIEW CONSTITUTES GENERAL COMPLIANCE WITH THE TOWN'S STANDARDS AND APPROVED VARIANCES, SUBJECT TO THESE PLANS BEING STAMPED, SIGNED, AND DATED BY THE PROFESSIONAL ENGINEER OF RECORD. REVIEW BY THE TOWN DOES NOT CONSTITUTE APPROVAL OF THE PLAN DESIGN OR ACCURACY AND CORRECTNESS OF ENGINEERING CALCULATIONS. ERRORS IN THE DESIGN OR CALCULATIONS REMAIN THE RESPONSIBILITY OF THE REGISTERED PROFESSIONAL ENGINEER WHOSE STAMP AND SIGNATURE ARE AFFIXED TO THIS DOCUMENT.
 - PONDS ARE MAINTAINED BY METRO DISTRICT.
 - OUTLET STRUCTURE AND OVERFLOW WEIR DETAILS ARE PROVIDED WITH CIVIL PLANS.
 - DROP STRUCTURE DETAILS ARE PROVIDED IN CHANNEL PLAN AND PROFILE SHEET.

BENCHMARK
DOUGLAS COUNTY CONTROL POINT KNOWN AS 1.060032, BEING A 3-1/4" ALUMINUM CAP, BEING LOCATED IN THE SOUTHWEST QUARTER OF SECTION 33, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN, HAVING A PUBLISHED ELEVATION OF 1799.2870 METERS (5903.13 FEET) NAVD '88 DATUM.

BASIS OF BEARINGS:
THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 9 BEING MONUMENTED AT THE NORTHEAST CORNER OF SAID SECTION 9 BY A 3-1/4" ALUMINUM CAP STAMPED LS 23053 AND AT THE EAST QUARTER CORNER OF SAID SECTION 9 BY A 2-1/2" ALUMINUM CAP STAMPED LS 6935 BEING CONSIDERED TO BEAR SOUTH 00°15'06" EAST, 2648.70 FEET.

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UNCCC 1.800.922.1987

10333 E. Dry Creek Rd. Suite 210 Englewood, CO 80150 Tel: (720) 482-9526 Fax: (720) 482-9546	Revisions	Date	Appr.	Date
	No.			
ESX MANAGEMENT 7253 South Alton Way CENTENNIAL, CO 80112	TRAILS AT CROWFOOT FINAL DRAINAGE MAP DRAINAGE MAP			
SCALE: AS SHOWN DRAWN BY: AVK CHECKED BY: JJJ DATE: MAY 2017	FILE NO: 8130283701	PREPARED UNDER THE SUPERVISION OF MARK SCHEURER COLORADO P.E. 48988		
SHEET NUMBER	6			



Note: 1) 0% slope indicates sump inlet.

DIRECT FLOW						
BASIN ID	AREA (AC)	Imperviousness (%)	Q2 (CFS)	Q100 (CFS)	Street Type	Slope (%)
E1	4.04	52.65	4.95	20.19	Local	2.70
E2	5.27	52.02	4.71	19.36	Local	0.00
E3	4.77	52.31	5.64	23.07	Local	3.00
E4	3.20	52.07	3.78	14.69	Local	4.00
E5	2.76	53.77	3.09	12.43	Local	0.00
E6	2.63	53.59	3.06	12.34	Local	1.00
E7	2.77	51.99	3.21	13.17	Local	0.00
E8	2.68	53.33	3.13	12.64	Local	2.00
E9	4.84	39.52	3.92	19.46	Local	2.00
E10	0.70	56.03	0.85	3.31	Local	1.00
E11	3.99	30.00	2.48	14.96	Local	1.00
E12	3.28	30.00	2.04	12.33	Local	6.00
E13	4.45	30.00	2.76	16.67	Local	1.00
E14	9.14	44.35	8.62	39.37	Local	0.00
E15	1.89	51.97	2.08	8.55	Local	2.00
E16	1.57	73.60	2.68	8.89	Local	6.00
E17	1.55	73.60	2.64	8.76	Local	1.00
E18	2.72	52.96	3.45	14.00	Local	1.50
E19	2.91	53.40	3.58	14.46	Local	1.20
E20	2.75	53.49	3.12	12.57	Local	2.00
E21	2.05	54.72	2.56	10.18	Local	2.00
E22	4.41	53.09	5.39	21.86	Local	2.70
E23	4.11	51.69	4.81	19.86	Local	2.70
E24	4.23	30.00	2.63	15.87	Local	2.00
E25	2.78	35.90	2.16	11.51	Local	2.00

Note: 1) 0% slope indicates sump inlet.

DIRECT FLOW						
BASIN ID	AREA (AC)	Imperviousness (%)	Q2 (CFS)	Q100 (CFS)	Street Type	Slope (%)
F1	1.71	90.64	4.59	13.55	Local	2.50
F2	1.77	93.50	4.96	14.53	Local	2.50
F3	3.60	19.77	1.47	12.47	Local	1.00
F4	3.79	53.06	4.56	18.47	Local	4.00
F5	4.58	46.86	4.46	19.66	Res. Blvd	4.00
F6	4.93	38.37	3.70	18.75	Local	0.00
F7	4.51	18.05	1.68	15.41	Res. Blvd	0.00
F8	7.93	34.99	5.57	30.18	Local	0.00
F9	1.28	66.27	1.75	6.18	Res. Blvd	0.00
F10	1.93	92.20	5.30	15.64	Local	2.50
F11	1.50	91.79	4.07	12.03	Local	2.50
F12	1.22	93.17	3.39	9.95	Local	2.50
F13	3.58	52.91	4.36	17.70	Local	4.00

CUMULATIVE FLOW		
Design Point ID	Q2 (CFS)	Q100 (CFS)
14	32.04	124.18
15	36.95	142.09
5A	14.28	56.31
5B	9.56	40.76
5C	18.85	70.87
5D	21.89	79.97
5E	23.45	83.44
5F	3.06	12.34
5G	6.16	142.25
5H	29.48	81.28
5I	3.92	19.46
5J	0.85	3.31
5K	2.48	14.96
5L	4.60	27.74
5M	2.76	16.67
5N	10.74	49.99
5O	2.08	8.55
5P	19.53	49.94
5Q	5.06	23.96
5R	4.86	14.00
5S	24.94	67.90
5T	3.12	12.57
5U	2.56	10.18
5V	9.85	39.52
5W	4.81	19.86
5X	2.63	15.87
5Y	2.16	11.51

CUMULATIVE FLOW		
Design Point ID	Q2 (CFS)	Q100 (CFS)
6A	21.41	56.86
6B	8.28	23.93
6C	9.45	44.87
6D	4.56	18.47
6E	29.25	58.80
6F	13.68	69.19
6G	3.39	22.24
6H	10.08	42.10
6I	1.75	36.44
6Ia	-	78.50
6J	17.19	46.79
6K	12.18	34.01
6L	3.39	9.95
6M	8.80	35.37
16	27.15	55.27
17	36.01	97.22

POND D	
Description	Value
Drainage Area (FT)	50.18
Percent Imperviousness (%)	51.42
WQCV (AC-FT)	0.88
EURV Volume (including WQCV) (AC-FT)	2.61
EURV Water Surface (FT)	5991.65
100-YR Volume (including EURV) (AC-FT)	4.49
100-yr water surface elevation (FT)	5993.55
Emergency Spillway Crest Elevation (FT)	5993.55
100-year Peak Inflow (CFS)	184.40
100-year Peak Outflow (CFS)	52.28
100-year Peak Allowable (CFS)	55.28

- NOTE:
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BENCHMARK
DOUGLAS COUNTY CONTROL POINT KNOWN AS 1.060032, BEING A 3-1/4" ALUMINUM CAP, BEING LOCATED IN THE SOUTHWEST QUARTER OF SECTION 33, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN, HAVING A PUBLISHED ELEVATION OF 1799.2870 METERS (5903.13 FEET) NAVD '88 DATUM.

BASIS OF BEARINGS:
THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 9 BEING MONUMENTED AT THE NORTHEAST CORNER OF SAID SECTION 9 BY A 3-1/4" ALUMINUM CAP STAMPED LS 23053 AND AT THE EAST QUARTER CORNER OF SAID SECTION 9 BY A 2-1/2" ALUMINUM CAP STAMPED LS 6935 BEING CONSIDERED TO BEAR SOUTH 00°15'06" EAST, 2648.70 FEET.

PREPARED UNDER THE SUPERVISION OF

MARK SCHEURER
COLORADO P.E. 48988

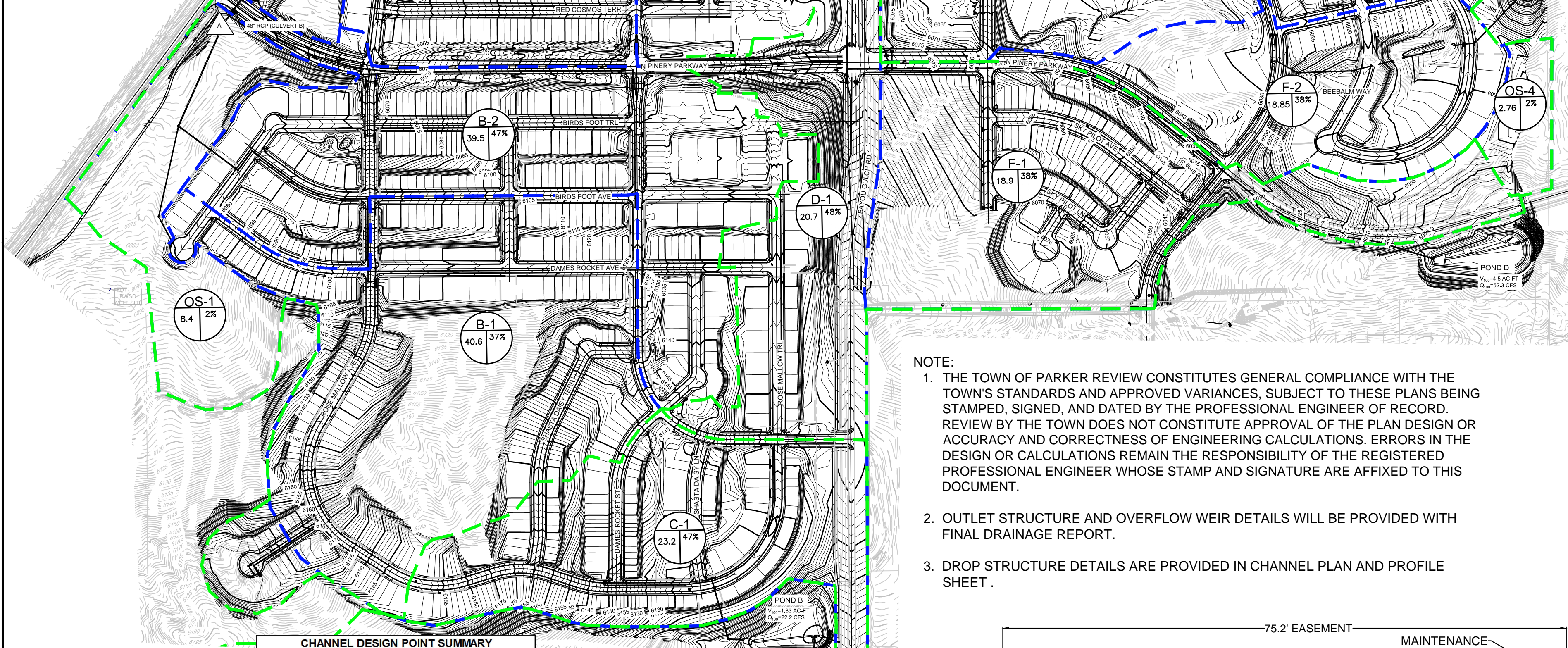
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UTILITY NOTIFICATION CENTER OF COLORADO

10333 E. Dry Creek Rd. Suite 210 Englewood, CO 80150 Tel: (720) 482-9526 Fax: (720) 482-9546	10333 E. Dry Creek Rd. Suite 210 Englewood, CO 80150 Tel: (720) 482-9526 Fax: (720) 482-9546
CVL CONSULTANTS	ESX MANAGEMENT 7253 South Alton Way CENTENNIAL, CO 80112
TRAILS AT CROWFOOT FINAL DRAINAGE MAP	DRAINAGE MAP
SCALE: AS SHOWN	FILE NO: 8130283701
DRAWN BY: AVK	CHECKED BY: JJJ
DATE: MAY 2017	
SHEET NUMBER	7

POND A		POND C	
Description		Description	
Drainage Area (FT)	174.49	Drainage Area (FT)	101.09
Percent Imperviousness (%)	37.56	Percent Imperviousness (%)	44.49
WQCV (AC-FT)	2.52	WQCV (AC-FT)	1.61
EURV Volume (including WQCV) (AC-FT)	6.45	EURV Volume (including WQCV) (AC-FT)	4.49
EURV Water Surface (FT)	5995.39	EURV Water Surface (FT)	5973.29
100-YR Volume (including EURV) (AC-FT)	11.29	100-YR Volume (including EURV) (AC-FT)	8.46
100-yr water surface elevation (FT)	5997.19	100-yr water surface elevation (FT)	5978.14
Emergency Spillway Crest Elevation (FT)	5997.19	Emergency Spillway Crest Elevation (FT)	5978.14
100-year Peak Inflow (CFS)	278.84	100-year Peak Inflow (CFS)	204.00
100-year Peak Outflow (CFS)	197.00	100-year Peak Outflow (CFS)	106.53
100-year Peak Allowable (CFS)	204.47	100-year Peak Allowable (CFS)	111.36

POND B		POND D	
Description		Description	
Drainage Area (FT)	23.2	Drainage Area (FT)	50.18
Percent Imperviousness (%)	47.36	Percent Imperviousness (%)	51.42
WQCV (AC-FT)	0.39	WQCV (AC-FT)	0.88
EURV Volume (including WQCV) (AC-FT)	1.10	EURV Volume (including WQCV) (AC-FT)	2.61
EURV Water Surface (FT)	6092.90	EURV Water Surface (FT)	5991.65
100-YR Volume (including EURV) (AC-FT)	1.83	100-YR Volume (including EURV) (AC-FT)	4.49
100-yr water surface elevation (FT)	6094.01	100-yr water surface elevation (FT)	5993.55
Emergency Spillway Crest Elevation (FT)	6094.01	Emergency Spillway Crest Elevation (FT)	5993.55
100-year Peak Inflow (CFS)	39.83	100-year Peak Inflow (CFS)	184.40
100-year Peak Outflow (CFS)	22.20	100-year Peak Outflow (CFS)	52.28
100-year Peak Allowable (CFS)	31.53	100-year Peak Allowable (CFS)	55.28



NOTE:

1. THE TOWN OF PARKER REVIEW CONSTITUTES GENERAL COMPLIANCE WITH THE TOWN'S STANDARDS AND APPROVED VARIANCES, SUBJECT TO THESE PLANS BEING STAMPED, SIGNED, AND DATED BY THE PROFESSIONAL ENGINEER OF RECORD. REVIEW BY THE TOWN DOES NOT CONSTITUTE APPROVAL OF THE PLAN DESIGN OR ACCURACY AND CORRECTNESS OF ENGINEERING CALCULATIONS. ERRORS IN THE DESIGN OR CALCULATIONS REMAIN THE RESPONSIBILITY OF THE REGISTERED PROFESSIONAL ENGINEER WHOSE STAMP AND SIGNATURE ARE AFFIXED TO THIS DOCUMENT.
2. OUTLET STRUCTURE AND OVERFLOW WEIR DETAILS WILL BE PROVIDED WITH FINAL DRAINAGE REPORT.
3. DROP STRUCTURE DETAILS ARE PROVIDED IN CHANNEL PLAN AND PROFILE SHEET.

Design Point	Q5 (CFS)	Q100 (CFS)
A	25.55	76.45
B	49.11	150.81
C	58.29	188.03
D	73.01	240.76
E	83.23	280.45

Design Point	Q5 (CFS)	Q100 (CFS)
A-1	11.86	32.59
A-2	19.60	53.08
A-3	7.60	21.76
A-4	5.01	16.11
B-1	20.87	68.84
B-2	26.81	74.30
C-1	14.00	39.86
OS-1	1.82	9.80
OS-2	1.62	8.90
OS-3	1.02	5.59
OS-4	0.31	1.87
OS-5	1.55	7.82

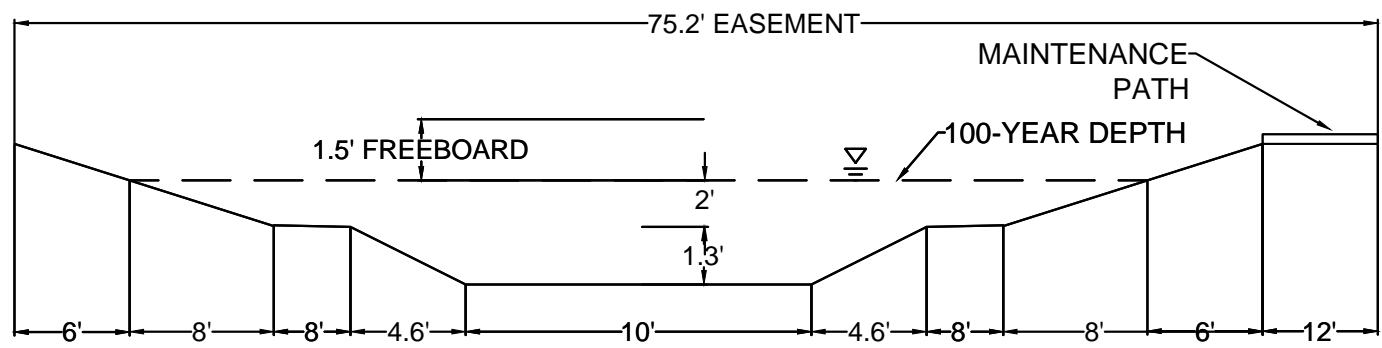
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THIS REVIEW DOES NOT CONSTITUTE APPROVAL OF ANY PRIVATE ON-SITE IMPROVEMENTS WHICH MAY BE SHOWN. CONSTRUCTION CANNOT COMMENCE UNTIL ALL REQUIRED DRAINAGE/TRAFFIC REPORT(S), FINAL DEVELOPMENT PLAN(S), SPECIAL REVIEW(S), GRADING PERMIT, AND/OR OTHER PERMITS ARE COMPLETE, APPROVED, AND ON FILE WITH THE TOWN OF PARKER.

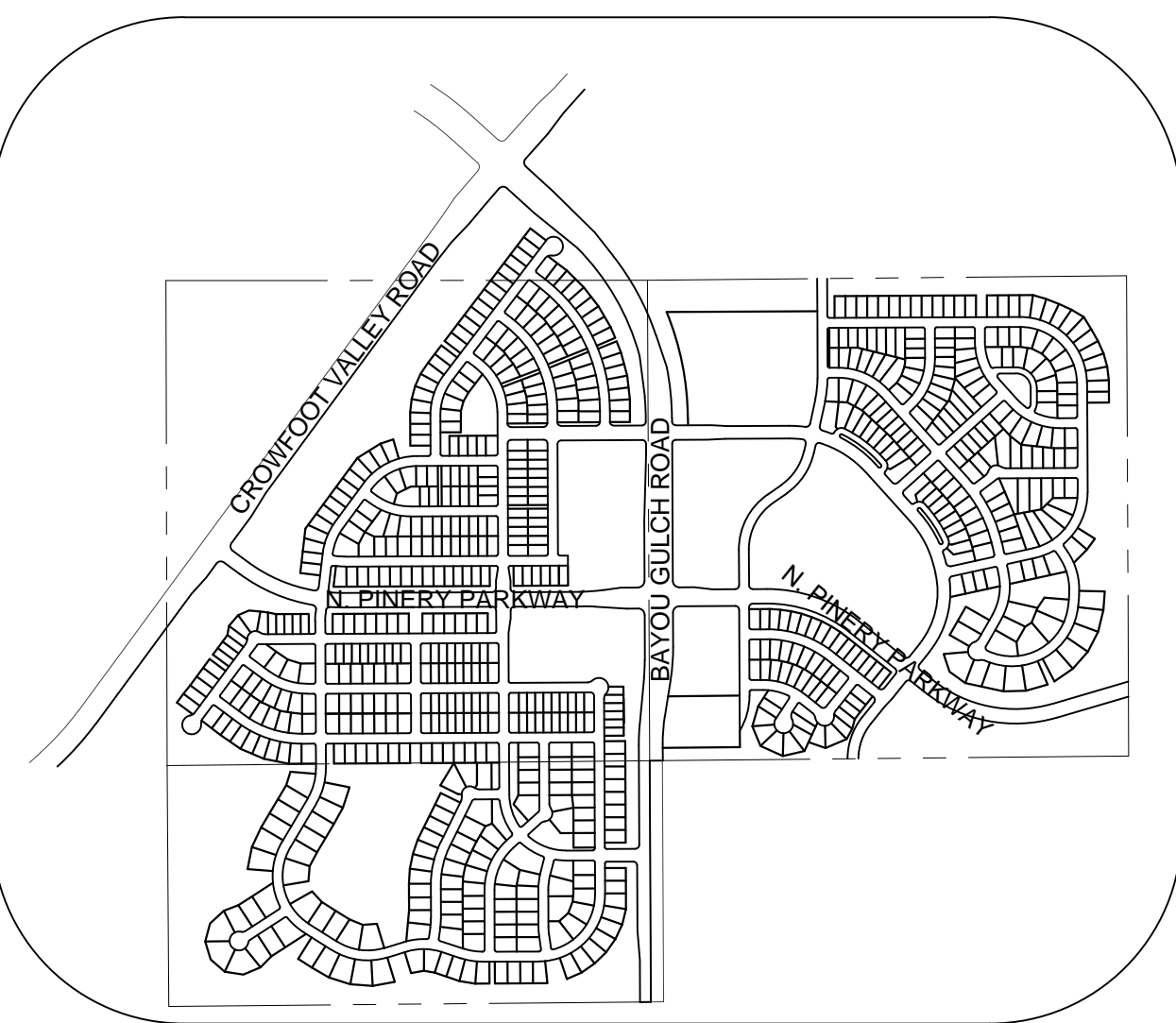
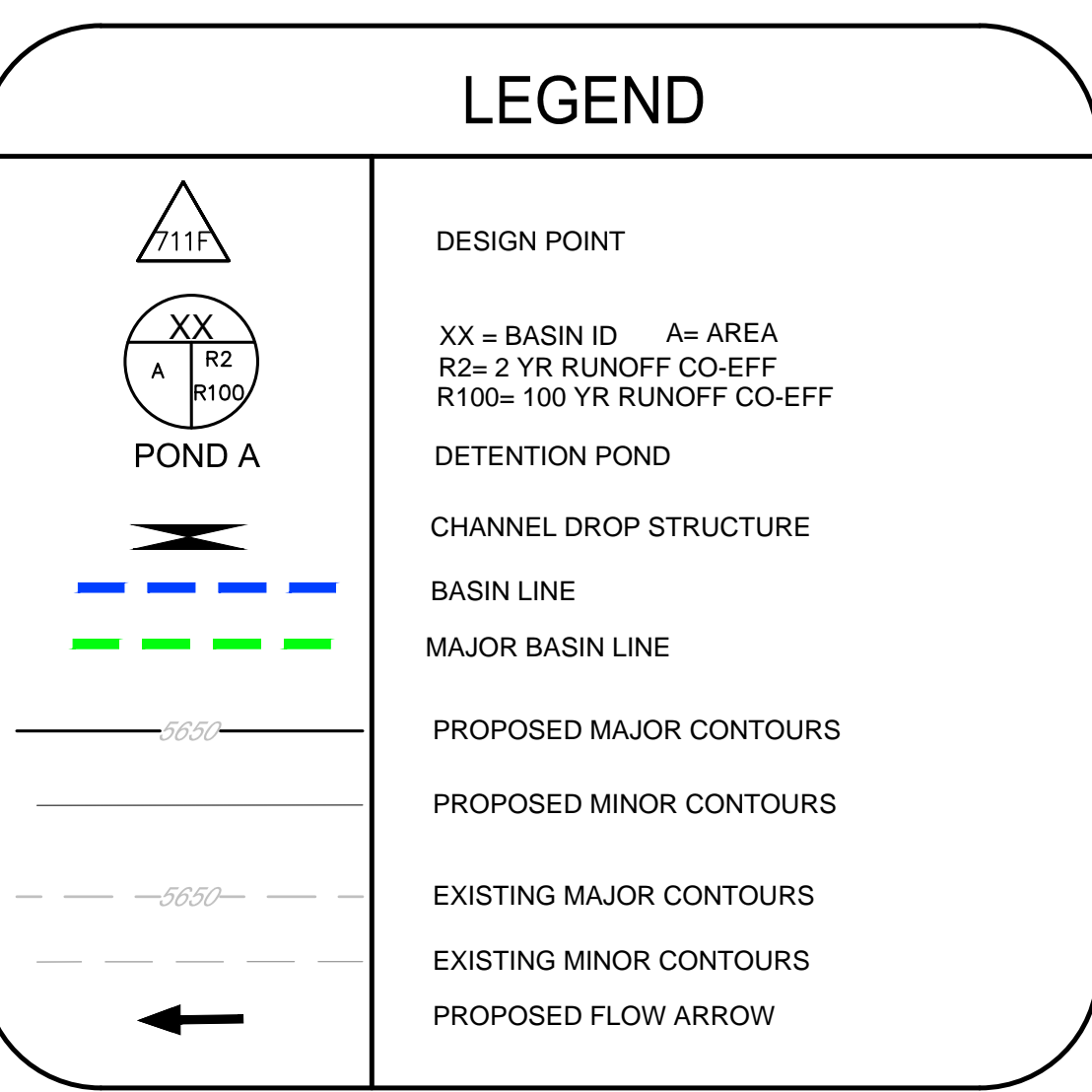
TOWN OF PARKER, PUBLIC WORKS DIRECTOR _____ DATE _____

TOWN OF PARKER, PUBLIC WORKS MANAGER - STORMWATER _____ DATE _____

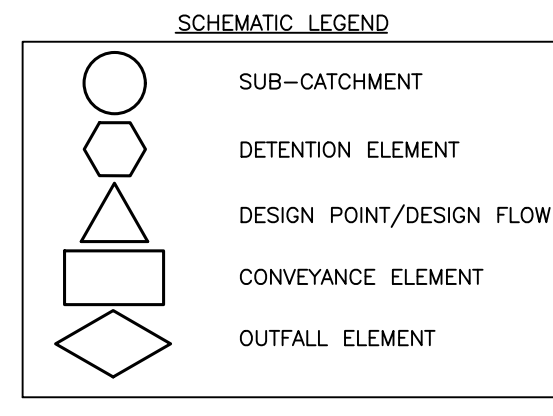
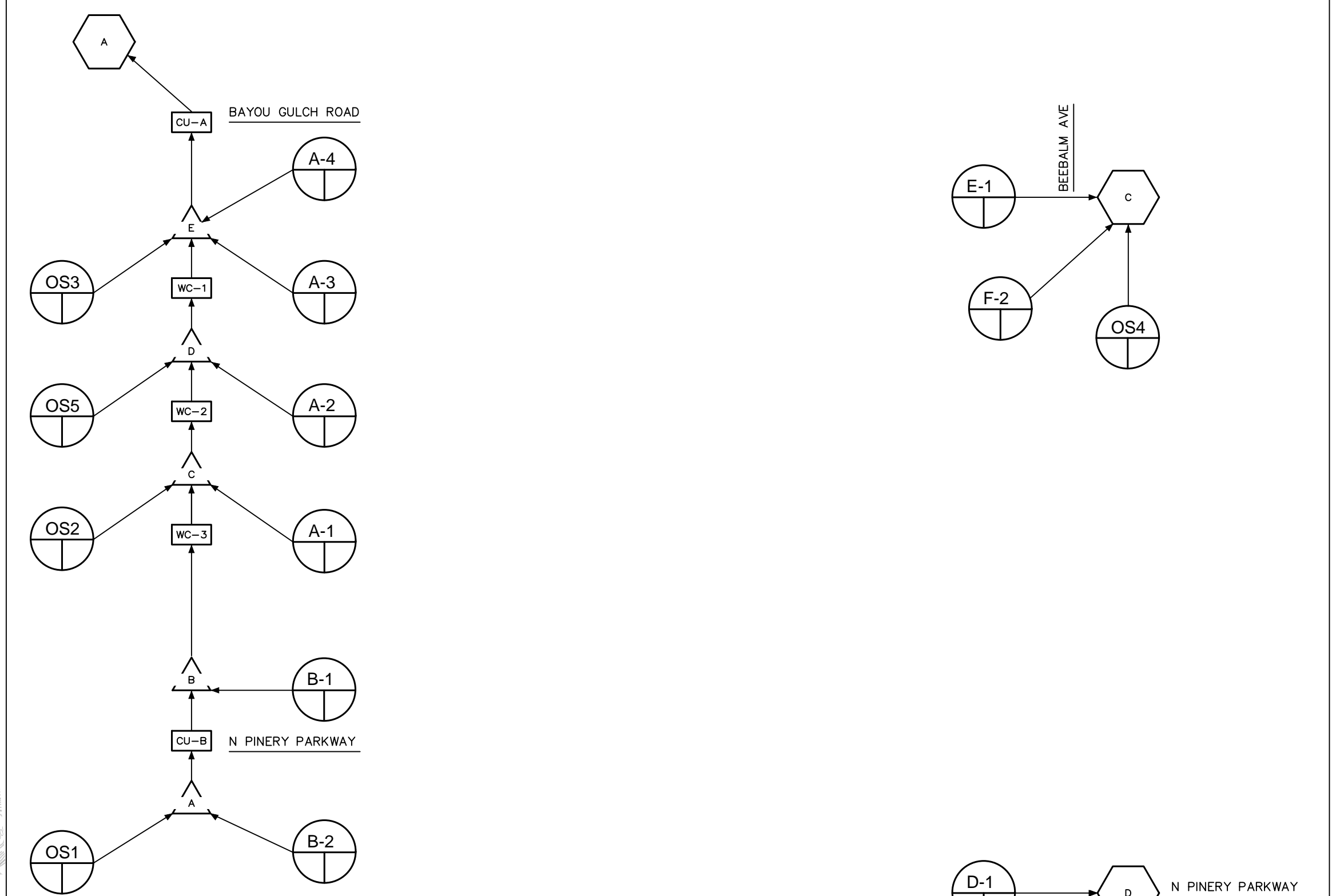
TOWN OF PARKER, PUBLIC WORKS MANAGER - TRANSPORTATION _____ DATE _____



CHANNEL SECTION A-A
NO TO SCALE



KEYMAP
N.T.S.



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BENCHMARK
DOUGLAS COUNTY CONTROL POINT KNOWN AS 1.060032, BEING A 3-1/4" ALUMINUM CAP, BEING LOCATED IN THE SOUTHWEST QUARTER OF SECTION 33, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN, HAVING A PUBLISHED ELEVATION OF 1799.2870 METERS (5903.13 FEET) NAVD '88 DATUM.

BASIS OF BEARINGS:
THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 9 BEING MONUMENTED AT THE NORTHEAST CORNER OF SAID SECTION 9 BY A 3-1/4" ALUMINUM CAP STAMPED LS 23053 AND AT THE EAST QUARTER CORNER OF SAID SECTION 9 BY A 2-1/2" ALUMINUM CAP STAMPED LS 6935 BEING CONSIDERED TO BEAR SOUTH 00°15'06" EAST, 2648.70 FEET.

PREPARED UNDER THE SUPERVISION OF

MARK SCHEURER
COLORADO P.E. 48988

10333 E. Dry Creek Rd. Suite 240 Englewood, CO 80152 Tel: (720) 482-9526 Fax: (720) 482-9546	CVL CONSULTANTS	ESX MANAGEMENT 7353 South Alton Way CENTENNIAL, CO 80112	TRAILS AT CROWFOOT FINAL DRAINAGE MAP SWMM DRAINAGE MAP	SCALE: AS SHOWN DRAWN BY: AYK CHECKED BY: JLU DATE: MAY 2017	FILE NO: 8130283701	SHEET NUMBER: 8	Revisions: No. Date Init. Appr. Date
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